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ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT 605810

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
Distribution	Liquid Effluent Services	N/A
5. Proj./Prog./Dept./Div.:	6. Cog. Engr.:	7. Purchase Order No.:
Liquid Effluent Programs	K. J. Lueck	N/A
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11. Receiver Remarks:		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
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1	WHC-SD-LEF-RPT-001		0	Liquid Effluent Sampling and Analysis Plan (SAP) Implementation Summary Report	n/a	3	1	

16. KEY

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E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)

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1	1	Cog.Eng. K. J. Lueck	K. J. Lueck	4/25/95	H6-28	D. R. Herman			S2-12	3	
1	1	Cog. Mgr. J. D. Williams			H6-28	D. J. McBride			T5-54	3	
3		L. T. Blackford		4/25/95	T5-28	P. C. Miller			N2-33	3	
3		D. L. Flyckt			S6-71	P. M. Olson			H6-28	3	
3		C. J. Geier			R2-36	R. A. Wahlquist			R1-43	3	
3		D. L. Halgren			L6-04	D. W. Wilson			S6-70	3	
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18. Signature of EDT Originator: K. J. Lueck Date: 4/25/95

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20. Cognizant Manager: [signature] Date: 4/25/95

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WHC-SD-LEF-RPT-001
Revision 0

Liquid Effluent Sampling and Analysis Plan (SAP) Implementation Summary Report

Westinghouse
Hanford Company Richland, Washington

Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

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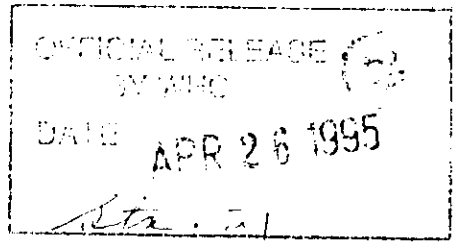
Sampling and Analysis SAP Liquid Effluent Programs	Name: K. J. Lueck Signature: K. J. Lueck Organization/Charge Code 86300/A2038

7. Abstract

This report summarizes liquid effluent analytical data collected during the Sampling and Analysis Plan (SAP) Implementation Program, evaluates whether or not the sampling performed meets the requirements of the individual SAPs, compares the results to the WAC 173-200 Ground Water Quality Standards. Presented in the report are results from liquid effluent samples collected (1992-1994) from 18 of the 22 streams identified in the Consent Order (No. DE 91NM-177) requiring SAPs.

8. RELEASE STAMP



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LIQUID EFFLUENT SAMPLING AND ANALYSIS PLAN (SAP) IMPLEMENTATION SUMMARY REPORT

May 1995

Prepared By:

Westinghouse Hanford Company
P.O. Box 1970
Richland, WA. 99352

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ABSTRACT

This report summarizes liquid effluent analytical data collected during the Sampling and Analysis Plan (SAP) Implementation Program and evaluates whether or not the sampling performed meets the requirements of the individual SAPs.

Presented in the report are the results from liquid effluent samples collected from 18 of 22 streams identified in the Consent Order (No. DE 91NM-177) requiring SAPs. These 18 waste streams are:

Waste Stream #1	Plutonium Finishing Plant (PFP) Wastewater
Waste Stream #2	242-S Evaporator Steam Condensate
Waste Stream #3	284-W Powerplant Wastewater
Waste Stream #4	T Plant Wastewater
Waste Stream #5	T Plant Laboratory Wastewater
Waste Stream #6	222-S Laboratory Wastewater
Waste Stream #7	PUREX Plant Chemical Sewer
Waste Stream #8	UO_3 Plant Process Condensate
Waste Stream #9	UO_3/U Plant Wastewater
Waste Stream #10	B Plant Chemical Sewer (BCE)
Waste Stream #11	B Plant Cooling Water (CBC)
Waste Stream #12	242-A Evaporator Cooling Water
Waste Stream #13	242-A Evaporator Stream Condensate
Waste Stream #14	241-A Tank Farm Cooling Water
Waste Stream #15	244-AR Vault Cooling Water
Waste Stream #16	284-E Powerplant Wastewater
Waste Stream #17	400 Area Secondary Cooling Water
Waste Stream #18	300 Area Process Wastewater

Samples could not be taken from the Waste Stream #19 183-D Filter Backwash, Waste Stream #20 2101-M Wastewater, Waste Stream #21 N Reactor Effluent, or Waste Stream #22 2724-W Laundry Wastewater, because there was no flow or the stream has been discontinued. Therefore, the analytical characteristics of these waste streams have not been addressed in this report.

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ACRONYMS AND ABBREVIATIONS

AKART	all known, available, and reasonable treatment
BAT	best available technology
DOE	U.S. Department of Energy
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FMEF	Fuels and Materials Examination Facility
FFTF	Fast Flux Test Facility
FY	fiscal year
gpd	gallons per day
gpm	gallons per minute
HVAC	heating, ventilation, air conditioning
ICP	inductively-coupled plasma
LEMIS	Liquid Effluent Monitoring Information System
LWDF	Liquid Waste Disposal Facility
MASF	Maintenance and Storage Facility
MDL	Method Detection Limit
NPDES	National Pollutant Discharge Elimination System
PCBs	Polychlorinated biphenyls
PFP	Plutonium Finishing Plant
PNL	Pacific Northwest Laboratory
PQL	Practical Quantitation Limit
PUREX	Plutonium and Uranium Recovery and Extraction Facility
RDL	Required Detection Limit
SAF	Sample Authorization Form
SAP	Sampling and Analysis Plan
TEDF	Treated Effluent Disposal Facility
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order*
WAC	Washington Administrative Code
WESF	Waste Encapsulation Storage Facility (not in text
WHC	Westinghouse Hanford Company

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1.0 INTRODUCTION

1.1 BACKGROUND

During the development of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), comments were received from the public concerning continued discharge of liquid effluents into soil column disposal units at the Hanford Site. As a result, the U.S. Department of Energy (DOE), with concurrence of the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA), made a commitment to (Ecology 1989):

- Document liquid effluent discharge histories
- Characterize liquid effluent discharges
- Assess the potential for contamination in soils and groundwater, and
- Assess the extent of existing contamination in soils and groundwater.

As part of Consent Order No. DE 91NM-177, Sampling and Analysis Plans (SAPs) were developed for the 22 waste streams under investigation (see Table 1.1). The objectives of the SAPs were to provide a representative sampling of waste water discharged to the soil column, account for variations in volumes and contaminant concentrations due to operational practices, and consider all of the parameters known or suspected to be associated with each liquid effluent stream such as the influence of operational practices, raw water characteristics, and process knowledge (DOE 1992).

1.2 OBJECTIVE

The objective of this report is to summarize the analytical data collected during the SAP Implementation Program from 1992 through 1994, and to evaluate whether or not the sampling that was performed at each of the 22 waste streams is in accordance with that sampling required by the individual SAPs.

Samples could not be taken from the Waste Stream #19 183-D Filter Backwash, Waste Stream #20 2101-M Wastewater, Waste Stream #21 N Reactor Effluent, or Waste Stream #22 2724-W Laundry Wastewater, because there was no flow or the stream has been discontinued. Therefore, the analytical characteristics of these waste streams have not been addressed in this report.

Table 1.1 List Of Facilities Under Investigation

Number	Facility Name
1	Plutonium Finishing Plant (PFP) Wastewater
2	242-S Evaporator Steam Condensate
3	284-E Powerplant Wastewater
4	T Plant Wastewater
5	T Plant Laboratory Wastewater
6	222-S Laboratory Wastewater
7	PUREX Plant Chemical Sewer
8	UO_3 Plant Process Condensate
9	UO_3/U Plant Wastewater
10	B Plant Chemical Sewer (BCE)
11	B Plant Cooling Water (CBC)
12	242-A Evaporator Cooling Water
13	242-A Evaporator Steam Condensate
14	241-A Tank Farm Cooling Water
15	244-AR Vault Cooling Water
16	284-E Powerplant Wastewater
17	400 Area Secondary Cooling Water
18	300 Area Process Wastewater
19*	183-D Filter Backwash
20*	2101-M Wastewater
21*	N Reactor Effluent
22*	2724-W Laundry Wastewater

* Sampling of these waste streams was not able to be obtained because there was of either no flow conditions or the waste stream has been discontinued.

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1.3 REPORT FORMAT AND LIMITATIONS

This report is written in a format designed to facilitate review of the composition status of each of the 18 waste streams. Section 2.0 presents background information about each of the facilities including the general site location, and details on processes which contribute to the waste stream. A summary of the sampling requirements outlined in the individual SAPs is also included. These requirements include sampling locations and sampling frequency.

Section 3.0 discusses the format of the analytical data tables presented in Appendix A. Section 4.0 discusses the analytical results from each of the 18 waste streams separately. For each waste stream, a comparison is made between the actual sampling performed and the sampling proposed in the SAP.

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2.0 WASTE STREAM DESCRIPTIONS

The following section provides a general description of each of the 18 waste streams, including a description of the facilities from which each of the waste streams originates, a general process description, and wastewater source description. The individual SAP objectives and requirements are also included for each of the waste streams.

2.1 WASTE STREAM #1: PLUTONIUM FINISHING PLANT (PFP)

The Plutonium Finishing Plant (PFP) is located in the west central portion of the 200 West Area and consists of a number of large and small buildings that are grouped to form the processing complex. Nine of these buildings are connected into the PFP waste water system. As of February 1992, only six of the buildings were actively discharging waste water (WHC 1992a).

The PFP has been used to purify and convert plutonium solids and plutonium nitrate solutions to other usable plutonium forms. Historically, liquid wastes produced by the plutonium processing were concentrated and transferred to double-shell storage tanks for storage. Waste water is generated at PFP from steam condensate, evaporative cooling water, and drinking fountains.

The primary objectives of the waste stream sampling proposed in the SAP was to collect data to evaluate the feasibility of using the historic sampling data for the characterization of PFP waste water, and to confirm that the resulting data is consistent with the waste water analytical data reported in the "PFP Waste water Stream-Specific Report" (WHC 1990e). Secondary objectives include supporting performance verification of the PFP Wastewater Treatment Facility, collecting data to support preparation of the WAC 173-216 permit application and the 173-240 engineering report for the Treated Effluent Disposal Facility, collecting data to support preparation of a groundwater impact assessment, supporting trend analyses and statistical evaluation of the waste water, and collecting data to support future remedial activities for the 216-Z-20 Crib.

Liquid effluent characterization samples for this waste stream were taken at Manhole Number 9. This location was selected to ensure that the sample included all waste water contributors which discharge to the 216-Z-20 Crib. Flow in this manhole is very turbulent, which ensured that the waste water is well mixed and the sample is representative.

In accordance with the SAP, four liquid effluent characterization samples were to be taken during the first year after approval of this SAP, and four liquid effluent characterization samples were to be taken during the operation of the Plutonium Reclamation Facility (PRF). The samples should have been taken with approximately equal intervals between them to obtain a general time distribution which makes the samples representative of the seasonal variations. A sample of the PFP sanitary water supply was also to be

taken during each sampling event for the purpose of baselining the liquid effluent characterization.

2.2 WASTE STREAM #2: 242-S EVAPORATOR STEAM CONDENSATE

The 242-S Evaporator Facility is located at the southwest end of the 200 West Area of the Hanford Site. The original purpose of this facility was to reduce the volume of low-level, radioactive waste through evaporation and concentration.

The liquid effluent waste stream consists entirely of non-contact steam condensate and cooling water. Steam condensate and cooling water are generated from the standby steam turbine. Steam condensate is also generated from the HVAC system.

The primary objectives of the waste stream sampling proposed in the SAP were to obtain several sets of known quality data to develop a long term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives of the SAP included providing high quality controlled data so that existing data could be evaluated, and solid waste loading and migration rates could be determined. The data would also be used to support WAC 173-240 Engineering Reports, groundwater impact assessments, and future remedial activities.

In accordance with the SAP, two liquid effluent characterization samples of the combined stream were to be taken at the pipe discharge point to the 216-U-14 Ditch following the approval of the SAP. Two more characterization samples were to be taken the following year.

2.3 WASTE STREAM #3: 284-W POWERPLANT WASTEWATER

The 284-W Power Plant is located in the east central portion of the 200 West Area. The 284-W Power Plant consists of three facilities: the 282-W Reservoir, the 283-W Water Treatment Plant, and the 284-W Powerhouse. These three facilities, along with the 277-W Fabrication Shop, make up the four contributors that discharge to the process waste water stream. These facilities all share a common process sewer which discharges to the 284-WB Percolation Pond (WHC 1993m).

The 282-W Reservoir and the 283-W Water Treatment Plant generate sanitary (potable) water from raw water. The raw water is pumped from the Columbia River to the 282-W Reservoir and then pumped to the 283-W Water Treatment Plant. Alum is added to the water to neutralize electrically-charged suspended particles and colloids. The alum-treated water is then sent through one of five flocculation basins and then into a settling basin. Overflow from the settling basin is filtered through one of four gravity multimedia filters. The clean water is chlorinated and stored in clearwells

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providing potable water to the 200 West Area. Waste water steams from this process includes: cooling water, pump strainer back flush water, heater condensate, overflow, filter backwash, floor drains, wash down water, and testing and sampling waste water (WHC 1993m).

The 284-W Powerhouse is a coal-fired steam plant that provides steam for the 200 West Area. In this process, purified water from the 283-W Water Treatment Plant is heated in coal-fired boilers to produce steam. Waste water streams from this process include: cooling water, blowdown waste water, water softener regeneration water, and steam heater condensate (WHC 1993m).

The 277-W Fabrication Shop fabricates metals and discharges equipment cooling water to the waste stream. Waste water streams from this process include: floor drains, cooling water, steam jet condensate, blowdown waste water and hydrotesting waste water (WHC 1993m).

The primary objective of the waste stream sampling proposed in the SAP was to provide characterization data for the liquid effluent stream and to provide sufficient data to verify a non-dangerous waste designation according to WAC 173-303. Other objectives of the SAP sampling included collecting confirmation data for the 200 Area Wastewater Engineering Report (WHC 1992a) to support best available technology (BAT)/all known, available, and reasonable treatment (AKART) evaluations and liquid effluent treatment system design; and collecting chemical and radiological constituent data to determine applicable loading and migration rates (WHC 1992b).

In accordance with the SAP, two rounds of samples were to be collected from a total of eight locations during the second week for field Activity #2. Samples were to be collected twice in Fiscal (FY) 1993 and FY1994 during a single pulse and/or batch wastewater discharge (Field Activity #3). One set of characterization samples were to be collected once per quarter (e.g., January, April, July, October) for one year at the same locations used in Field Activity #3, using the same collection methods.

2.4 WASTE STREAM #4: T PLANT WASTEWATER

The T Plant Complex was built in 1944, and is located in the northeast corner of the 200 West Area. T Plant was used to extract plutonium and uranium from spent reactor fuel using the bismuth phosphate separation process. In 1957, the T Plant Complex was converted to a decontamination and equipment refurbishment facility (WHC 1992a).

The primary process currently associated with the T Plant is decontamination and decommissioning. The waste water discharged to the T Plant waste water stream includes boiler discharges, miscellaneous potentially contaminated effluents, and once-through cooling water. The waste streams derived from the T Plant and T Plant Laboratory Wastewater (Waste Stream #5) are addressed separately in this report since they flow from the site through separate drainages. Waste water from the T Plant is currently

being released through of Drainage Ditch 216-T-4-2, while waste water from the T Plant Laboratory is released through Drainage Ditch 216-T-1.

The objectives of the waste stream sampling proposed in the SAP were to obtain several sets of known quality data to develop a long term sampling plan, provide sufficient data to verify a non-dangerous waste designation for the liquid effluent stream, and provide quality assurance requirements specific to the liquid effluent stream not covered in the QAPP, as necessary.

According to the SAP, characterization samples were to be taken from the ditch near the pipe outflow (216-T-4-2), or from Manhole Number 4 at least twice a year for the first two years following approval of the SAP. These locations were selected to ensure that the sample includes all effluent contributors to the discharge to the 216-T-4-2 Ditch and is representative of the entire stream. Two locations were identified in order to provide a viable sampling point during conditions of extreme cold and/or snow when the outflow pipe would not be accessible, or times of low flow where the manhole sampling point would not be viable. In addition, characterization samples were to be taken of the T Plant raw water supply.

2.5 WASTE STREAM #5: T PLANT LABORATORY WASTEWATER

The T Plant Laboratory is located in a facility known as the 221-T Building Head-End. This laboratory is located in the northeast corner of the 200 West Area, and consists of a canyon area that extends from the basement floor to the roof. This canyon area has several deck levels and a parapet wall. Adjacent to the canyon house are four floor levels including an electrical switch gear room, a chemistry laboratory, office area, a change room, lunch room, control room, instrument room, maintenance shop, and storage areas (WHC 1992a).

The waste streams originating from the T Plant Laboratory and T Plant are addressed separately in this report since they flow from the site through separate drainages. Waste water from the T Plant Laboratory is currently being discharged to Drainage Ditch 216-T-1, while waste water from the T Plant is discharged through Drainage Ditch 216-T-4-2.

The sources of waste water at the T Plant Laboratory includes seven upper floor sumps, cooling water or steam condensate from the heating and ventilation system, three basement laboratory sumps, and one control room floor drain.

The objectives of the waste water sampling proposed in the SAP were to obtain several sets of known quality data to develop a long term sampling plan, provide sufficient data to verify a non-dangerous waste designation for the liquid effluent stream, and provide quality assurance requirements specific to the liquid effluent stream not covered by the QAPP, as necessary.

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According to the SAP, characterization samples were to be taken from the inlet to the 216-T-1 Ditch at least twice a year for the first two years following the approval of the SAP. A sample of the T Plant sanitary and raw water supply were also to be taken during each of the characterization sampling events.

2.6 WASTE STREAM #6: 222-S LABORATORY WASTEWATER

The 222-S Laboratory Complex was built in 1951, and is located at the southern end of the 200 West Area. The primary function of this facility is to provide chemical and radiological analyses of samples associated with ongoing operations and research programs in various other facilities within the 200 West Area. The 222-S Laboratory is housed in a three-story building including a basement, a first floor divided into three areas, and a second floor. Two of the areas on the first floor contain laboratories and service areas that support work with low- to intermediate-level, and intermediate- to high-level radioactive, or toxic material. The remainder of the building is used for a glass shop, storage area, etc. (WHC 1992a).

The 222-S Laboratory Complex has discharge points from the 222-S Building, 219-S Waste Storage Facility, 222-SA Laboratories, and 291-S Stack Fan House.

The primary objectives of the waste stream sampling proposed in the SAP included obtaining several sets of known quality data to develop a long-term sampling plan, confirming the analyte concentration data reported in the stream specific reports, and supporting the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives included providing high quality controlled data for the evaluation of routine process sampling methods so that existing data can be evaluated and used; providing data to support development of waste water treatment projects and groundwater remediation studies; and providing historical data for the WAC 173-240 engineering reports and waste discharge permit applications.

According to the SAP, liquid effluent samples were to be collected at least twice during the following 12 months after approval of the SAP.

2.7 WASTE STREAM #7: PLUTONIUM AND URANIUM RECOVERY AND EXTRACTION FACILITY (PUREX) CHEMICAL SEWER

The Plutonium and Uranium Recovery and Extraction Facility (PUREX) Plant is a nuclear fuel processing facility located in the southeast corner of the 200 East Area. The primary PUREX processing equipment is housed in the 202-A Building which is a heavily shielded, reinforced-concrete structure. Auxiliary PUREX equipment is located either outdoors or in one of several supporting buildings (WHC 1992a).

The PUREX Plant is not currently operating; however, current production of the PUREX Chemical Sewer stream is associated with equipment and processes that were used in historical operations and that must be maintained during standby mode. When it was in a processing mode, the primary function of the PUREX Plant was to separate and recover usable actinides (chiefly plutonium and uranium) from an array of fission products contained in irradiated nuclear reactor fuel. The process involved dissolving irradiated nuclear reactor fuel and then extracting the actinides from the resulting aqueous solutions through application of liquid-liquid solvent extraction technology. These operations, as well as routine hand washing and showering by plant personnel, produce three liquid waste streams including the PUREX Chemical Sewer, PUREX Steam Condensate, and PUREX Cooling Water. These waste streams make up the PUREX Chemical Sewer Waste Stream.

The primary objectives of the waste stream sampling proposed in the PUREX Chemical Sewer SAP were to obtain several sets of known quality data to develop a long term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. The secondary objectives of the SAP included providing high quality controlled data so that existing data could be evaluated, and solid waste loading and migration rates could be determined. The data would also be used to support the WAC 173-240 Engineering Reports, groundwater impact assessments and future remedial activities.

In accordance with the SAP, characterization samples were to be taken in the 295-AC Effluent Monitoring Building at least twice during the first year following approval of the SAP.

2.8 WASTE STREAM #8: UO_3 PLANT PROCESS CONDENSATE

The UO_3 Plant is located in the south-central portion of the 200 West Area of the Hanford Site in Washington. The Plant consists of two primary process facilities, Buildings 224-U and 224-UA, and several ancillary buildings. The UO_3 Plant facility received 60 % UNH solution from the PUREX Plant at Hanford and converted the solution to UO_3 pellets, nitric acid and condensed water vapor. The principal processes were evaporation and calcination.

Most of the UO_3 Plant process condensate stream originated in off-gas condensers. The effluent water, except for some process make-up water from the raw water supply, was surplus condensed vapor from two evaporation processes. Throughout the processes water vapor, steam condensate, raw water, wash water, and rainwater were collected and discharged to the 216-U-17 Crib. Currently the UO_3 Plant has been shutdown and will be decommissioned. There is no effluent discharge other than stormwater runoff.

The two primary objectives of the characterization sampling proposed in the UO_3 Plant Process Condensate Waste Water SAP were to obtain several sets

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of known quality data to develop a long term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives of the SAP included providing high quality controlled data so that existing data could be evaluated, and solid waste loading and migration rates could be determined. The data would also be used to support WAC 173-240 Engineering Reports, groundwater impact assessments, and future remedial activities.

In accordance with the SAP, liquid effluent characterization and routine samples of the stream were to be collected from two locations. One sample taken from the transfer line (preneutralization process condensate) and the other taken from the Tk-C5 discharge line to the 216-U-17 Crib (post-neutralization process condensate). One liquid effluent characterization sample was to be taken of the condensate produced from the processed rainwater prior to the stabilization campaign; two during the stabilization campaign; one following the stabilization campaign; and one annually thereafter.

2.9 WASTE STREAM #9: UO_3/U PLANT WASTEWATER

Refer to section 2.8 for the UO_3 Plant description.

The UO_3 wastewater was primarily cooling water from the process equipment condensers and air compressors. The waste stream also received steam condensate and wash down water from non-radiation floor drains. Currently the UO_3 Plant has been shutdown and will be decommissioned. There is no effluent discharge other than stormwater runoff.

The two primary objectives of the waste stream sampling proposed in the UO_3 Plant Waste Water Effluent SAP were to obtain several sets of known quality data to develop a long term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives of the SAP included providing high quality controlled data so that existing data could be evaluated, and solid waste loading and migration rates could be determined. The data would also be used to support WAC 173-240 Engineering Reports, groundwater impact assessments, and future remedial activities.

In accordance with the SAP, one characterization sample was to be taken of the wastewater during the processing of the rainwater prior to the stabilization campaign, one following the stabilization campaign, and one annually thereafter. One sampling location on the main sewer branch to the 207-U Basins was to be used to characterize the waste water discharged to the 216-U-14 Ditch.

2.10 WASTE STREAM #10 B PLANT CHEMICAL SEWER (BCE)

The B Plant Complex is located in the west central portion of the 200 East Area, and was constructed in the mid 1940's as a fuel reprocessing facility. Following completion of extensive modifications in the early 1960's, the second mission of the B Plant Complex was to remove radioactive cesium and strontium from liquid waste. The current mission of the B Plant Complex is to ensure safe storage and management of radiological inventories in B Plant, including the Waste Encapsulation Storage Facility (WESF). The B Plant Complex is comprised of three main adjoining buildings including 271-B, 221-B, and 225-B. In addition, several adjacent buildings have been constructed to support the waste processing operations (WHC 1992a).

The B Plant Complex receives and stores various chemicals from commercial manufacturers for use in the operation of the low-level waste handling systems, generation of demineralized water, and conditioning of water used in heating, ventilation, and air conditioning (HVAC) units. The effluents generated at the B Plant Complex include steam condensate, domestic waste water, evaporative cooling effluents, and potentially contaminated miscellaneous effluents. From 1992-1995, the B Plant Chemical Sewer will be combined with the B Plant Cooling Water.

The two primary objectives of the waste stream sampling proposed in the B Plant Chemical Sewer SAP were to provide characterization data for the liquid effluent stream during different facility operational configurations, and to determine the waste designation as specified in WAC 173-303. Other objectives of the SAP sampling included collecting confirmation data for the 200 Area Wastewater Engineering Report (WHC 1992) to support BAT/AKART evaluations and liquid effluent treatment system design, and collecting chemical and radiological constituent data to determine applicable loading and migration rates (WHC 1992d).

In accordance with the SAP, characterization samples were to be taken from either the 211-BA Building or Manhole 14, since they are both downstream from all contributors. Samples were also to be collected at four additional locations including one from tank TK-900 in Building 221-B, and three background samples from Manholes 4, 294-B, and 284-E. Characterization samples at the five different locations were to be taken twice a year to characterize the different operating conditions affecting the effluent stream.

2.11 WASTE STREAM #11: B PLANT COOLING WATER (CBC)

See Section 2.10 for background description of the B Plant Complex.

The B Plant Cooling Water effluent is an active stream and receives the majority of the effluent from raw water discharge from a single pass through the B Plant Process Tanks cooling coils and 225-B Pool Cells heat exchangers. In addition, the B Plant Cooling Water (CBC) receives raw water from the

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testing of deep well emergency backup pumps and steam condensate from minor contributors.

The primary objectives of the characterization sampling proposed at the B Plant Cooling Water were to provide characterization data for the liquid effluent stream during different facility operational configurations, and to determine the waste designation for the B Plant Cooling Water per WAC 173-303. In addition, the data collected by this sampling plan was also meant to provide confirmatory data for the 200 Area Wastewater Engineering Report (WHC 1992) to support BAT/AKART evaluations and liquid effluent treatment design, and to provide data on chemical and radiological constituents in order to determine loading and rate of migration to support the assessment of impacts on continued discharge (WHC 1992e).

From 1992 to 1995, the B Plant Cooling Water effluent was combined with the B Plant Chemical Sewer effluent (WHC 1992b). In accordance with the SAP, characterization sampling was to be performed at 207-BA Retention Pond, since this location is downstream from all contributors. In addition, sampling was to be performed at 221-BG or CBC-1 (24-in diameter effluent), 221-BA (15-in diameter effluent), Stairwell #1, and 294-B (raw water supply). The stairwell sample could be omitted if no steam condensate were present at the time of sampling. One characterization sample at each the five different locations was to be taken.

2.12 WASTE STREAM #12: 242-A EVAPORATOR COOLING WATER

The 242-A Evaporator Facility is located in south-central Washington, along the east border of the 200 East Area of the Hanford Site. The 216-B-3 Pond System is located just east of the 200 East Area boundary fence.

The Evaporator is the primary waste concentrator for Hanford Site low-level radioactive, hazardous wastes that are stored in underground double-shell tanks (DST). The 242-A Evaporator uses evaporative concentration to reduce the volume of wastes, thus reducing the number of tanks required for storage. The facility receives a mixed waste stream which it separates into two streams: the concentrated slurry, which contains essentially all of the radionuclides and inorganic constituents, and the process condensate which contains volatile organic materials, and a minimal amount of radionuclides.

A total of ten contributors feed the 242-A Evaporator cooling water wastestream. The majority of the wastewater is only generated while the evaporator is operating.

Two primary objectives of the environmental sampling proposed in the 242-A Evaporator cooling water SAP were to obtain several sets of known quality of data to develop a long term sampling plan, and to confirm the analyte concentration data reported in the stream specific reports and the conclusion that the stream does not contain dangerous waste as defined in WAC 173-303, "Dangerous Waste Regulations," as amended. Secondary objectives of

the SAP were to provide highly qualified controlled data for the evaluation of routine process sampling methods so that existing data can be evaluated and utilized, to provide solid waste loading data to support development of waste water treatment projects and groundwater remediation studies, and to provide historical data for the WAC 173-240 engineering reports and WAC 173-216 waste discharge permit applications.

In accordance with the SAP, four samples were to be taken at each sampling point (R-C-2 sampler, compressor water discharge) to provide a baseline characterization. The first two samples at each location was to be taken during the first evaporator campaign and the other two during the second evaporator campaign.

2.13 WASTE STREAM #13: 242-A EVAPORATOR STEAM CONDENSATE

See Section 2.12 for background description of the 242-Evaporator Facility.

A total of eleven contributors have fed the 242-A Evaporator Steam Condensate wastestream, during waste processing in the past. As part of the Waste Tank commitment to waste minimization some of these contributors have been eliminated. There are no active wastestream contributors during shutdown/maintenance of the facility.

Two primary objectives of the waste stream sampling proposed in the 242-A Evaporator cooling water SAP were to obtain several sets of known quality of data to develop a long term sampling plan, and to confirm the analyte concentration data reported in the stream specific reports and the conclusion that the stream does not contain dangerous waste as defined in WAC 173-303, "Dangerous Waste Regulations," as amended. Secondary objectives of the SAP were to provide highly qualified controlled data for the evaluation of routine process sampling methods so that existing data can be evaluated and utilized, to provide solid waste loading data to support development of waste water treatment projects and groundwater remediation studies, and to provide historical data for the WAC 173-240 engineering reports and WAC 173-216 waste discharge permit applications.

The primary objectives of the characterization sampling proposed in the 242-A Evaporator Steam Condensate SAP were to obtain several sets of known quality data to develop a long term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives of the SAP included providing high quality control data so that existing data could be evaluated, and solid waste loading and migration rates could be determined. The data would also be used to support WAC 173-240 Engineering Reports, groundwater impact assessments and future remedial activities.

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In accordance with the SAP, four liquid effluent characterization samples of the combined stream were to be collected at a sample port on the RC-1 radiation monitoring sample line. The first two samples were to be taken during the first evaporator campaign and the other two during the second evaporator campaign.

2.14 WASTE STREAM #14: 241-A TANK FARM COOLING WATER

The 241-A Tank Farm Complex is located along the east border of the 200 East Area of the Hanford Site. The facility consists of four, one million gallon tanks and their auxiliary systems, to which high-heat producing, high-level radioactive waste was sent and stored during metals processing campaigns at the Hanford Site.

Each of the 241-AY and -AZ Farms, also known as the "aging water" tank farms, has two underground double-shell tanks equipped with above-ground monitoring and control facilities. The aging waste tanks have a ventilation system and steam coils that are designed to allow heating of the waste to maintain a desired liquid temperature or boiloff rate. The main purpose of the 241-A Tank Farm cooling condensers is to provide a cooling mechanism in this ventilation system to allow contaminated water vapors to be condensed and returned to the tank. The 241-A Tank Farm Cooling Water stream consists of one major contributor, the condenser cooling water, and several smaller contributors.

The primary objectives of the waste stream sampling proposed in the 241-A Tank Farm Cooling Water SAP were to obtain several sets of known quality data to develop a long-term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives of the SAP included providing high quality controlled data so that existing data could be evaluated, solid waste loading and migration rates could be determined. The data would also be used to support WAC 173-240 Engineering Reports, groundwater impact assessments and future remedial activities.

In accordance with the SAP, liquid effluent characterization samples of the combined stream were to be collected from the warm water sump. The only variation to the stream is when the Emergency Cooling Water System (ECWS) is used. This was addressed by taking samples under both operating conditions. Two liquid effluent characterization samples were to be taken for each mode of operation per year for the first two years after the approval of the SAP.

2.15 WASTE STREAM #15: 244-AR VAULT COOLING WATER

The 244-AR Vault Facility is located in south-central Washington, along the east border of the 200 East Area of the Hanford Site. The 244-AR Vault is a canyon-type structure with three below-grade cells containing four waste storage tanks. All four tanks have mixing, cooling, and discharge pump capabilities. The 244-AR Vault is currently in standby operational mode. The vault was used for interim storage in the transfer of tank waste to B Plant for removal of cesium and strontium. Waste from tank sluicing was stored and treated in the 244-AR Vault tanks prior to transfer to B Plant.

In the present standby mode of operation, the only contributors to the stream are from the HVAC system cooling and heating, and a standby air compressor. Additional contributors would become active if 244-AR were used in the pretreatment system. Currently the only flow from this facility is a minor steam condensate flow when the vessel vent heater is operating. This is an infrequent operation of short duration that is required to transfer sump contents. This will occur only one to two times per year for less that three days each. The flowrate of the condensate is less than 0.5 gpm.

The two primary objectives of the characterization sampling proposed in the 244-AR Vault Cooling Water SAP were to obtain several sets of known quality data to develop a long term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives of the SAP included providing high quality controlled data so that existing data could be evaluated, and solid waste loading and migration rates could be determined. The data would also be used to support WAC 173-240 Engineering Reports, groundwater impact assessments, and future remedial activities.

According to the SAP, liquid effluent characterization samples of the combined stream were to be collected from Manhole 1 adjacent to the 2904 AR Building north of the canyon building. A total of four characterization samples were to be taken over two years.

2.16 WASTE STREAM #16: 284-E POWERPLANT WASTEWATER

The 284-E Power Plant is located in the central eastern portion of the 200 East Area. The 284-E Power Plant consists of three processing facilities: the 282-E Reservoir, the 283-E Water Treatment Plant, and the 284-E Powerhouse. These facilities all share a common process sewer which discharges to the 216-B Ditch.

The 282-E Reservoir and the 283-E Water Treatment Plant generate sanitary (potable) water from raw water. The raw water is pumped from the Columbia River to the 282-E Reservoir and then pumped to the 283-E Water Treatment Plant. Alum is added to the water to neutralize electrically-charged suspended particles and colloids. The alum-treated water is then sent

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through one of five flocculation basins and then into a settling basin. Overflow from the settling basin is filtered through one of four gravity multimedia filters. The clean water is chlorinated and stored in clearwells providing potable water to the 200 East Area. Waste water steams from this process include: cooling water, pump strainer back flush water, heater condensate, overflow, filter backwash, floor drains, wash down water, and testing and sampling waste water.

The 284-E Powerhouse is a coal-fired steam plant that provides steam for the 200 East Area. In this process, purified water from the 283-E Water Treatment plant is heated in coal-fired boilers to produce steam. The steam is generated for heating and process purposes in the 200 East Area. Waste water streams from this process include: cooling water, blowdown waste water, water softener regeneration water, and steam heater condensate.

The primary objectives of the waste water sampling proposed in the 284-E Powerplant Process Waste Water SAP were to obtain several sets of known quality data to develop a long-term sampling plan, to confirm the analyte concentration data reported in the stream specific reports, and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Secondary objectives of the SAP included providing high quality controlled data so that existing data could be evaluated, and solid waste loading and migration rates could be determined. The data would also be used to support WAC 173-240 Engineering Reports, groundwater impact assessments, and future remedial activities.

In accordance with the SAP, two rounds of samples were to be collected from a total of eight locations during the second week for field Activity #2. Samples were to be collected twice in Fiscal (FY) 1993 and FY1994 during a single pulse and/or batch wastewater discharge (Field Activity #3). One set of characterization samples were to be collected once per quarter (e.g., January, April, July, October) for one year at the same locations used in Field Activity #3, using the same collection methods.

2.17 WASTE STREAM #17: 400 AREA SECONDARY COOLING WATER

The 400 Area is located in the central portion of the Hanford Site in Washington. The 400 Area contains four major facilities that are cross-connected by underground piping. The effluent from each facility is routed through individual pipelines to the main drain line. The drain line leaves the 400 Area and discharges to percolation ponds north of the 400 Area. The four contributing facilities and their associated waste streams are described below.

- Fuels and Materials Examination Facility (FMEF). The FMEF is a high security, multi-storied structure with the capability to handle low and high exposure radioactive materials. The facility has never been used for its original purpose and currently houses personnel offices. Routine contributors are cooling water for the

FMEF Cooling Towers, air conditioning cooling water and relief of pressure from the process water supply system. Infrequent contributors consist of electric water coolers, janitorial sinks, floor drains and equipment drains.

- Fast Flux Test Facility (FFTF). The FFTF is a sodium-cooled test reactor facility. The reactor operated from 1980 until 1992 when it was ordered into standby status by DOE. The reactor may possibly be restarted in 1996 for Pu-238 production. Routine contributors consist of blowdown system waste water, tower overflow, equipment drains, precipitation runoff, and an operator sink.

- Maintenance and Storage Facility (MASF). The purpose of this facility is to provide maintenance, repair, and storage for radioactive or specialized equipment used in support of the FFTF. The routine contributor is the equipment drain that collects cooling water from the Process Equipment Room air compressor. Three floor drains also contribute to the waste stream.

- 481-A Water Pumphouse. The 481-A pumphouse is a concrete block building that provides space for a diesel fire pump and two sanitary water pumps. The facility is detached from the other structures. No radioactive material is in the building. The routine contributor receives leakage from the sanitary pump packing. Floor drains that collect waste water from equipment leaks or equipment maintenance also contribute to the water stream.

The objectives of the characterization sampling proposed in the 400 Area Secondary Cooling Water SAP were to collect data to evaluate the feasibility of using historic sampling data for the characterization of waste water, provide data to support a conclusive waste designation, confirm the analyte concentration data reported in the stream specific reports and to support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303. Other objectives were to routinely monitor the stream for flow rate and constituents and ensure internal limits are met, support WAC 173-240 Engineering Reports and a WAC-173-216 permit application, and provide data on chemical and radiological constituents to determine loading and migration rates.

In accordance with the SAP, characterization samples were to be collected from three contributing discharge points and the end-of-pipe location where the effluent is discharged into the Percolation Ponds. Characterization samples were to be taken at the four different locations twice initially to establish baseline. A sample of the sanitary water was also to be taken during each of the effluent characterization sampling events.

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2.18 WASTE STREAM #18: 300 AREA PROCESS WASTEWATER

The 300 Area is located adjacent to the Columbia River on the Hanford Site. A variety of office buildings, research laboratories, and support facilities are located in the 300 Area.

Process waste water from Pacific Northwest Laboratory (PNL) and WHC facilities is directed to a process sewer. The process sewer waste stream consists primarily of equipment cooling water, steam condensate, water treatment plant waste streams, and laboratory-generated waste water. Potable water is used for equipment cooling and accounts for a large percentage of the total waste water flow.

The objectives of the characterization sampling proposed in the 300 Area Process Waste Water SAP were to support the National Pollutant Discharge Elimination System (NPDES) permit process, provide characterization for Treated Effluent Disposal Facility (TEDF) secondary waste disposal, provide additional records of the quality and content of effluent discharges to the 300 Area process trench, provide evidence that the upstream facilities are meeting the waste acceptance criteria for the TEDF, and provide baseline effluent performance monitoring for the TEDF.

In accordance with the SAP, liquid effluent characterization samples of the combined stream were to be obtained at the third-to-last manhole before the waste water enters the existing process trenches. This manhole effectively represents the "end-of-pipe," because no other incoming flows contribute to the process sewer beyond this point.

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3.0 DATA PRESENTATION

This report presents sampling results for each of the 18 waste streams in Appendix A. The data was taken directly from the LEMIS Laboratory Data Statistical reports and is presented for the convenience of the reader. Accuracy of at least 95% is the goal of LEMIS.

The statistics reported in the Laboratory Data Statistical Report include the minimum, maximum, and average of all data, meeting a criteria, from a particular sample location and over a specified time period. The constituents listed are the only constituents having at least one positive analytical result that indicates the constituent is detected. The reported constituents must have supporting analytical data that meets the following criteria to be included in the statistical evaluation;

- Reported analytical result is above the detection level,
- Analytical datum must have either no laboratory data qualifiers or one or more of the following laboratory qualifiers, C, D, S, or X,
- Analytical datum must have either no validation qualifier or a validation qualifier of J.

The constituent data meeting the above criteria are counted and included in the column headed by "n". The average constituent concentration is calculated base on "n". When there is only one constituent analytical result meeting the above criteria, (n=1), the result is placed under the column headed maximum. The total number of times a constituent was reported, with or without any qualifier, is included in the column headed by "N".

The detection limit, as stated in the statistical tables, is the lowest result for a constituent in the LEMIS data base that has a U laboratory qualifier. The U laboratory qualifier is applied to the laboratory result to indicate a compound or analyte was analyzed for and not detected in the sample and the result reported is the sample quantitation limit corrected for sample dilution. The sample quantitation limit can be either the Practical Quantitation Limit (PQL), the Minimum Detection Limit (MDL), or the Minimum Detectable Activity (MDA).

Definitions of qualifiers used are as follows:

C This flag applies to pesticide results where the identification has been confirmed by GC/MS. This flag should not be used by the laboratory if GC/MS confirmation was attempted but unsuccessful, in which case, the laboratory should use an "X" flag as defined below. The "X" flag is then defined in the Sample Delivery Group narrative.

D This flag identified compounds identified in an analysis at a secondary dilution factor.

J Indicates the compound or analyte was analyzed for and detected. The associated concentration is an estimate, but the data are useable for decision making purposes.

S Indicates the reported value was determined by the Method of Standard Additions.

U Indicates the compound or analyte was analyzed for and not detected in the sample.

X This is a non-specific flag used to properly define the results. If used, this flag must be properly defined within the body of the Sample Delivery Group.

As a summary to this report a charts are included to indicate the number of constituents detected and the number of constituents not detected, but yet reported.

Since many of the SAPs required the collection of waste stream samples from more than one sampling location, it is important to note that the end-of-pipe location is the most critical when comparing the results to WAC 173-200 groundwater guidelines. For each of the waste streams that were sampled, the sampling locations shown in Table 3.2 represent the end-of-pipe.

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Table 3.2 Waste Stream End-of-Pipe Locations

WASTE STREAM	END-OF-PIPE LOCATION
Waste Stream #1 PFP	Manhole #9 Waste Water
Waste Stream #2 242-S Evaporator Steam Condensate	216-U-14 Ditch
Waste Stream #3 284-W Powerplant Wastewater	Manhole #7 upstream to 284-WB Pond
Waste Stream #4 T-Plant Wastewater	216-T-4-2 Ditch
Waste Stream #5 T-Plant Laboratory Wastewater	216-T-1 Ditch
Waste Stream #6 222-S Laboratory Wastewater	207-SL Retention Basin
Waste Stream #7 PUREX Plant Chemical Sewer	295-AC
Waste Stream #8 UO_3 Plant Process Condensate	TK-C5 discharge to 216-U-17 Crib
Waste Stream #9 UO_3/U Plant Wastewater	Main sewer branch to 207-U Basin
Waste Stream #10 B Plant Chemical Sewer (BCE)	211-BA Building or Manhole #14
Waste Stream #11 B Plant Cooling Water	207-BA Retention Pond
Waste Stream #12 242-A Evaporator Cooling Water	R-C-2 Sampler and point where the cooling water discharges to a funnel floor drain in the AMU room.
Waste Stream #13 242-A Evaporator Steam Condensate	Sample Port off RC-1 Sampler
Waste Stream #14 241-A Tank Farm Cooling Water	Warm water sump
Waste Stream #15 244-AR Vault Cooling Water	Manhole #1
Waste Stream #16 284-E Powerplant Wastewater	216-B Ditch Manhole #7
Waste Stream #17 400 Area Secondary Cooling Water	Percolation Ponds
Waste Stream #18 300 Area Wastewater	Third manhole from outfall

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4.0 DISCUSSION OF RESULTS

The analytical results from the SAP sampling of 18 liquid effluent waste streams have been summarized in text format in the following section, while analytical summary tables are presented in Appendix A. Table 4.1 list the individual SAP document numbers, number of samples required and the actual dates the samples were taken.

4.1 WASTE STREAM #1: PLUTONIUM FINISHING PLANT (PFP) WASTEWATER

The chemical and radiological data resulting from the sampling of the PFP waste water and raw water/sanitary water are presented in Tables A-1.1 thru A-1.3. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at PFP met objectives outlined in the SAP. These objectives included collecting data to evaluate the feasibility of use of historic sampling data for the characterization of PFP waste water, and confirming the waste water analytical data as identified in the PFP Wastewater Stream-Specific Report (WHC 1990e) were correct. However, since the PRF has not operated as planned, samples were not taken during its operation.

Other SAP objectives which were met included collecting data which can be used to support preparation of a groundwater impact assessment, and supporting trend analyses and statistical evaluation of the wastewater.

Five samples were collected from Manhole Number 9 as required by the SAP. As many as two raw water and two sanitary water samples were collected.

4.2 WASTE STREAM #2: 242-S EVAPORATOR STEAM CONDENSATE

The chemical and radiological data resulting from the sampling of the 242-S Evaporator Steam Condensate is presented in Table A-2.1. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at 242-S Evaporator Steam Condensate met objectives outlined in the SAP, in that known quality data was obtained which can be used to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific report are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303. It can also be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering reports. Due to no flow conditions of the waste stream, only two of the required four

Table 4.1 Sampling an Analysis Plan (SAP) Summary

Stream	SAP No.	No. of required Sampling Events per SAP	Date sampling event performed
PFP Wastewater	WHC-SD-CP-PLN-010	4 events in 1993 4 events during PRF operation	8/27/92, 1/28/93, 5/20/93, 7/27/93, 7/27/94
		sanitary water sample with each event	5/20/93, 7/27/93, 7/27/94
242-S Evaporator Steam Condensate	WHC-SD-WM-EV-071	2 events in 1993 2 events in 1994	3/4/93, 5/19/94
284-W Powerplant Wastewater	WHC-SD-WM-PLN-033	1 event per quarter (4 total)	9/22/93, 10/13/93, 3/17/94, 5/4/94
T Plant Wastewater	WHC-SD-WM-PLN-030	2 events in 1993 2 events in 1994	7/8/93, 10/27/93, 2/28/94, 4/20/94
		Raw water sample with each event	taken on same day as wastewater samples
T Plant Laboratory Wastewater	WHC-SD-WM-PLN-036	2 events in 1993 2 events in 1994	7/8/93, 2/15/93, 2/8/94
		Raw water samples with each event	Used same as per SAP# WHC-SD-WM-PLN-030
222-S Laboratory Wastewater	WHC-SD-WM-EV-075	2 events in 1993	7/7/93, 10/19/93, 1/20/94, 4/13/94
PUREX Plant Chemical Sewer	WHC-SD-CP-PLN-013	2 events in 1993 2 events in 1994	8/10/93, 11/15/93, 3/1/94, 5/23/94
		Steam condensate sample each event	taken on same day as wastewater samples
		Sanitary water sample during each event	taken on same day as wastewater samples
		Raw water sample during each event	taken on same day as wastewater samples
UO_3 Plant Process Condensate	WHC-SD-CP-PLN-012	4 events during different operational modes	10/27/92, 6/7/93, 6/9/93, 6/21/93, 9/15/94
UO_3/U Plant Wastewater	WHC-SD-CP-PLN-011	4 events during different operational modes	taken on same day as wastewater samples
B Plant Chemical Sewer (BCE)	WHC-SD-WM-PLN-029	2 events in 1993 2 events in 1994	4/20/93, 8/3/93, 2/15/94, 5/17/94

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Stream	SAP No.	No. of required Sampling Events per SAP	Date sampling event performed
B Plant Cooling Water (CBC)	WHC-SD-WM-PLN-037	1 event with 2 annual events until 1995	4/21/93, 8/2/93, 2/14/94, 5/16/94
242-A Evaporator Cooling Water	WHC-SD-WM-EV-078	2 events from 2 different campaigns	4/20/94, 5/17/94, 9/28/94, 11/2/94
242-A Evaporator Steam Condensate	WHC-SD-WM-EV-079	2 events from 2 different campaigns	4/20/94, 5/17/94, 11/1/94, 11/2/94
241-A Tank Farm Cooling Water	WHC-SD-WM-EV-077	2 events in 1993 2 events in 1994 (normal operation)	3/3/93, 7/19/93, 11/9/93, 2/24/94
		2 events in 1993 2 events in 1994 (ECWS operation)	4/29/93, 7/29/93, 5/19/94
244-AR Vault Cooling Water	WHC-SD-WM-EV-076	4 events	3/4/93, 7/19/93, 11/9/93, 2/24/94
284-E Powerplant Wastewater	WHC-SD-WM-PLN-034	1 event per quarter (4 total)	8/16/93, 11/1/93, 4/6/94, 6/6/94
400 Area Secondary Cooling Water	WHC-SD-FF-PLN-002	2 events	9/15/92, 1/26/93, 5/25/93, 8/24/93
		sanitary water sample with each event	taken on same day as wastewater samples
300 Area Process Wastewater	WHC-SD-LO45-PLN-001		9/16/92, 9/1/93, 11/30/93, 3/1/94, 6/1/94

characterization samples were taken. As required by the SAP, liquid effluent sampling was performed at the pipe discharge point to the 216-U-14 Ditch.

4.3 WASTE STREAM #3: 284-W POWERPLANT WASTEWATER

The chemical and radiological data resulting from the sampling of the 284-W waste water is presented in Table A-3.1 thru A-3.7. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at the 284-W Power Plant met objectives outlined in the SAP, in that the sampling provided liquid effluent stream data that can be used to assist the waste designation as specified in WAC 173-303-070. The data from this sampling also allows one to make comparisons with earlier data provided in the 200 Area Wastewater Engineering Report, and allows interpretation to be made regarding the effectiveness of BAT/AKART. This data is also available to assist the evaluation of loading and rate-of-migration studies.

As required by the SAP, samples were collected from all eight of the locations specified in the SAP. A minimum of two samples were collected from each locations during the 1993 sampling and two during the 1994 sampling.

4.4 WASTE STREAM #4: T PLANT WASTEWATER

The chemical and radiological data resulting from the sampling of the T Plant waste water and raw water are presented in Tables A-4.1 and A-4.2. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at T Plant met the objectives outlined in the SAP, in that effluent characterization samples were collected at least twice during first two years following approval of the SAP, from the 216-T-4-2 Ditch near the pipe outflow. In addition, samples of the T Plant raw water supply system were taken at the same time. As required by the SAP, the results from this sampling can be used to support the designation for the liquid effluent stream, and quality assurance sampling was performed to assure that the data quality objectives were being met.

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4.5 WASTE STREAM #5: T PLANT LABORATORY WASTEWATER

The chemical and radiological data resulting from the sampling of the T Plant Laboratory waste water and raw water are presented in Tables A-5.1. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at T Plant Laboratory met the objectives outlined in the SAP, in that known quality data was obtained which can be used to evaluate long term sampling needs, sufficient data was obtained to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site, and sufficient quality assurance sampling was performed to support data validation. As required by the SAP, three liquid effluent characterization samples were taken at the inlet to the 216-T-1 Ditch, however the fourth sampling event was not completed due to low flow of effluent.

4.6 WASTE STREAM #6: 222-S LABORATORY WASTEWATER

The chemical and radiological data resulting from the sampling of the 222-S waste water and sanitary water are presented in Tables A-6.1 and A-6.2. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at 222-S met the objectives outlined in the SAP, in that known quality data was collected to assist the evaluation of long term sampling needs, sufficient data was obtained to assist the evaluation of whether or not the waste stream contains dangerous waste, quality assurance sampling was performed during the sampling to support data validation, and adequate data was provided to assist the development of waste water treatment projects and the WAC 173-240 Engineering Reports. Four liquid effluent characterization samples were taken at the west end of the 207-SL Retention Basin.

4.7 WASTE STREAM #7: PUREX PLANT CHEMICAL SEWER

The chemical and radiological data resulting from the sampling of the PUREX Plant waste water and raw/sanitary water are presented in Tables A-7.1 thru A-7.6. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at PUREX Chemical Sewer met the objectives outlined in the SAP, in that known quality data was obtained which can be used to assist the evaluation of long term sampling needs, sufficient data was obtained to allow one to evaluate whether or not a non-dangerous waste designation is appropriate for the site, and sufficient quality assurance sampling was performed to support data validation. As required by the SAP, a total of four samples were collected from the 295-AC Effluent

Monitoring Building. Raw water, sanitary water, and steam condensate samples were also collected at the same time.

4.8 WASTE STREAM #8: UO_3 PLANT PROCESS CONDENSATE

The chemical and radiological data resulting from the sampling of UO_3 Process Condensate and raw water is presented in Tables A-8.1 and A-8.2. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed of the UO_3 Process met the objectives outlined in the SAP, in that known quality data was obtained to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific reports are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303, can be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering Reports.

Consistent with the SAP, five samples were collected from the transfer line connecting the Tank TK-X37 to TK-C5 and from the TK-C5 discharge to the 216-U-17 crib. Currently the UO_3 Plant has been shutdown and will be decommissioned. There is no effluent discharge other than stormwater runoff.

4.9 WASTE STREAM #9: UO_3/U PLANT WASTEWATER

The chemical and radiological data resulting from the sampling of UO_3 Liquid Effluent is presented in Table A-9.1. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed of the UO_3 Liquid Effluent met the objectives outlined in the SAP, in that known quality data was obtained to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific reports are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303, can be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering Reports.

As required per the SAP, five liquid effluent samples were collected from the main sewer branch of the 207-U Basins. Raw water samples were taken at the same time. Currently the UO_3 Plant has been shutdown and will be decommissioned. There is no effluent discharge other than stormwater runoff.

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4.10 WASTE STREAM #10: B PLANT CHEMICAL SEWER (BCE)

The chemical and radiological data resulting from the sampling of the B Plant Chemical Sewer are presented in Tables A-10.1 thru A-10.5. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at B Plant Chemical Sewer met the objectives outlined in the SAP, in that sampling was performed during different facility operational configurations, and data was made available for use in determining the waste designation per WAC 173-303-070. In addition, this data allows a comparison to be made with the 200 Area Wastewater Engineering Report (WHC 1992a) to support BAT/AKART evaluations, which in turn will assist liquid effluent treatment design. This data is also available for use in evaluating loading and rate of migration studies to support the assessment of environmental impacts on continued discharge.

A required by the SAP, four characterization samples were taken at the five different locations: 211-BA sump; Tank 900; Manholes 4; 284-E; and raw water samples taken at the 294-B. At least two sanitary water and steam condensate samples were also taken.

4.11 WASTE STREAM #11: B PLANT COOLING WATER (CBC)

The chemical and radiological data resulting from the sampling of the B Plant Cooling Water are presented in Tables A-11.1 thru A-11.5. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at B Plant Cooling Water met the objectives outlined in the SAP, in that sampling was performed during different facility operational configurations, and data is available for use in determining the waste designation for the cooling water per WAC 173-303-070. In addition, this data allows a comparison to be made with the 200 Area Wastewater Engineering Report to support BAT/AKART evaluations, which in turn will assist liquid effluent treatment design. This data is also available for use in evaluating loading and rate of migration studies to support the assessment of environmental impacts on continued discharge.

As required by the SAP, four characterization samples were collected from the five different locations: vicinity of Stairwell #1; 221-BA Sampleshed; 221-BG Sampleshed; 207-BA Retention Pond; and raw water samples were collected from 294-B.

4.12 WASTE STREAM #12: 242-A EVAPORATOR COOLING WATER

The chemical and radiological data resulting from the sampling of the 242-A Evaporator Cooling Water is presented in Table A-12.1 thru A-12.3. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed of the 242-A Evaporator Cooling Water met the objectives outlined in the SAP, in that known quality data was obtained to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific reports are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303. It can also be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering Reports.

As required by the SAP, four characterization were collected at the two different locations during two different evaporator campaigns.

4.13 WASTE STREAM #13: 242-A EVAPORATOR STEAM CONDENSATE

The chemical and radiological data resulting from the sampling of the 242-A Evaporator Steam Condensate is presented in Table A-13.1 and A-13.2. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed of the 242-A Evaporator Steam Condensate met the objectives outlined in the SAP, in that known quality data was obtained to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific reports are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303. It can also be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering Reports.

As required by the SAP, four characterization were collected at the two different locations during two different campaigns.

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4.14 WASTE STREAM #14: 241-A TANK FARM COOLING WATER

The chemical and radiological data resulting from the sampling of 241-A Cooling Water/Emergency Water is presented in Table A-14.1 and A-14.2. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at 241-A Cooling Water/Emergency Water met the objectives outlined in the SAP, in that known quality data was obtained to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific reports are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303, can be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering Reports.

As required per the SAP, four characterization samples were taken of the cooling water under normal operation, however, only three samples were taken during the ECWS operation due to no flow conditions.

4.15 WASTE STREAM #15: 244-AR VAULT COOLING WATER

The chemical and radiological data resulting from the sampling of the 244-AR Cooling Water is presented in Table A-15.1. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at 244-AR Cooling Water met the objectives outlined in the SAP, in that known quality data was obtained to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific reports are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303. It can also be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering Reports.

As required per the SAP, four liquid effluent characterization samples were taken.

4.16 WASTE STREAM #16: 284-E POWERPLANT WASTEWATER

The chemical and radiological data resulting from the sampling of 284-E Powerplant is presented in Table A-16.1 thru A-16.7. The following sections compare the sampling activities performed against those activities required by the SAP.

The results from the sampling performed at 284-E Powerplant met the objectives outlined in the SAP, in that known quality data was obtained which can be used to assist the evaluation of long term sampling needs, and using this data one can determine whether or not the analyte concentrations reported in the stream specific reports are reasonable. This data can be used to assist the evaluation of whether or not a non-dangerous waste designation is appropriate for the site as defined by WAC 173-303. It can also be used to assist solid waste loading and migration rate evaluations, and can be used to support future WAC 173-240 Engineering Reports.

As required by the SAP, samples were collected from all eight of the locations specified in the SAP. A minimum of two samples were collected from each locations during the 1993 sampling and two during the 1994 sampling.

4.17 WASTE STREAM #17: 400 AREA SECONDARY COOLING WATER

The chemical and radiological data resulting from the sampling of the 400 Area FFTF Liquid Effluent is presented in Tables A-17.1 and A-17.6. The following section compares the sampling activities performed against those activities required by the SAP.

The results from the sampling performed in the 400 Area met the 1993 objectives outlined in the SAP, in that the resulting data is of sufficient quality to be used to assist in an evaluation of the feasibility of use of historic sampling data for the characterization of waste water, and to provide analytical data to support the conclusive waste designation. This data can also be used to confirm the analytical data collected in the stream specific reports, support the conclusion that the stream does not contain dangerous waste as defined by WAC 173-303, and support the WAC 173-240 Engineering Report and WAC-173-216 permit application. Finally, this data can be used to assist the determination of loading and migration rates.

As specified in the SAP, waste water samples were collected from the percolation ponds, sewer weir box, FMEF waste stream, cooling tower overflow, and cooling tower blowdown.

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4.18 WASTE STREAM #18: 300 AREA PROCESS WASTEWATER

The chemical and radiological data resulting from the sampling of the 300 Area Process Sewer is presented in Table A-18.1 and A-18.2. The following section compares the sampling activities against those activities required by the SAP.

The results from the sampling performed at the 300 Area Process Sewer met the objectives outlined in the SAP, in that the data collected can be used to help support the NPDES permit process, and provides characterization data which can be used for TEDF secondary waste disposal. The data also provides information regarding the quality and content of the effluent discharges to the 300 Area process trench. This information can assist the determination of whether or not the upstream facilities are meeting the waste acceptance criteria for the TEDF, and can provide a baseline for monitoring effluent performance.

As required by the SAP, five liquid effluent samples were collected from the third manhole upstream from the outfall prior to the existing process trenches.

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APPENDIX A

LABORATORY DATA STATISTICAL REPORT FOR EACH STREAM

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TABLE A-1.1

LABORATORY DATA STATISTICAL REPORT
PLUTONIUM FINISHING PLANT WASTEWATER
Sample Location: MANHOLE 9
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	4	3	5	10	17	5	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	48	10	UG/L
ALUMINUM	7429-90-5	2	2	85.6	158.8	232	*	UG/L
ANTIMONY	7440-36-0	3	2	18.6	37.8	57	35	UG/L
ARSENIC	7440-38-2	2	2	2.5	2.65	2.8	*	UG/L
BARIUM	7440-39-3	4	4	24.8	29.38	33.9	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.88	1.2	.3	UG/L
CADMIUM	7440-43-9	4	4	1.5	3.65	7	*	UG/L
CALCIUM	7440-70-2	2	2	19200	20400	21600	91.8	UG/L
CHROMIUM	7440-47-3	4	3	3.3	8.9	14.4	*	UG/L
COBALT	7440-48-4	4	4	2.5	5.6	9	10	UG/L
COPPER	7440-50-8	4	4	8.7	14.25	25.8	*	UG/L
IRON	7439-89-6	2	2	53.7	86.85	120	*	UG/L
LEAD	7439-92-1	3	2	1.4	2.8	4.2	*	UG/L
MAGNESIUM	7439-95-4	2	1	NA	NA	4310	*	UG/L
MANGANESE	7439-96-5	2	2	4.5	5.55	6.6	*	UG/L
MERCURY	7439-97-6	4	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	4	4	4.2	13.23	24	*	UG/L
POTASSIUM	7440-09-7	2	2	877	1108.5	1340	*	UG/L
SILVER	7440-22-4	4	3	3.3	5.1	7	6	UG/L
SODIUM	7440-23-5	2	2	1850	2020	2190	*	UG/L
TIN	7440-31-5	2	2	6.7	311.85	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.6	5.3	8	*	UG/L
ZINC	7440-66-6	4	2	16.7	21.9	27.1	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	4	3	2.83	15.28	30	.2	PCI/L
PLUTONIUM-238	13981-16-3	4	3	.15	.73	1.4	.01	PCI/L
AMERICIUM-241	14596-10-2	3	2	1.8	6.9	12	*	PCI/L
PLUTONIUM-241	PU-241	4	2	13	49	85	.04	PCI/L
PLUTONIUM-239/240	PU-239/240	4	3	8.7	15.81	30	*	PCI/L
ALKALINITY	ALKALINITY	4	4	52	55.75	60	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	1	NA	NA	6	5	MG/L
CHLORIDE	12595-89-0	2	2	1.8	1.95	2.1	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	125	136.5	146	6	UMHO
NITROGEN IN NITRATE	NO3-N	2	1	NA	NA	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	2	.16	.18	.19	.1	MG/L
PH MEASUREMENT	PH	4	4	7.3	7.85	8.1	NA	PH
SULFATE	14808-79-8	4	4	10.7	11.7	13	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	6	60	83	5	MG/L

TABLE A-1.2

LABORATORY DATA STATISTICAL REPORT
PLUTONIUM FINISHING PLANT WASTEWATER
Sample Location: RAW WATER - MO-031
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	2	1	NA	NA	24	5	UG/L
MONOCROTOPHOS	6923-22-4	2	1	NA	NA	11	.96	UG/L
ALUMINUM	7429-90-5	2	2	253	301	349	*	UG/L
ANTIMONY	7440-36-0	1	1	NA	NA	57	35	UG/L
BARIUM	7440-39-3	2	2	27	30.45	33.9	1.1	UG/L
BERYLLIUM	7440-41-7	2	2	1	1	1	.3	UG/L
CADMIUM	7440-43-9	2	2	4	5.5	7	*	UG/L
CALCIUM	7440-70-2	2	2	19300	22300	25300	91.8	UG/L
CHROMIUM	7440-47-3	2	2	7	8	9	*	UG/L
COBALT	7440-48-4	2	2	8	8.5	9	10	UG/L
COPPER	7440-50-8	2	2	8	8.5	9	*	UG/L
IRON	7439-89-6	2	2	21.7	34.4	47.1	*	UG/L
MAGNESIUM	7439-95-4	2	2	4340	5100	5860	*	UG/L
MANGANESE	7439-96-5	2	2	2	3	4	*	UG/L
NICKEL	7440-02-0	2	2	19	19.5	20	*	UG/L
POTASSIUM	7440-09-7	2	2	877	1193.5	1510	*	UG/L
SILVER	7440-22-4	2	1	NA	NA	7	6	UG/L
SODIUM	7440-23-5	2	2	1860	2220	2580	*	UG/L
VANADIUM	7440-62-2	2	2	7	7.5	8	*	UG/L
ZINC	7440-66-6	2	1	NA	NA	7	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	2	1	NA	NA	1.63	.2	PCI/L
ALKALINITY	ALKALINITY	2	2	50	51	52	.5	MG/L
CHLORIDE	12595-89-0	2	1	NA	NA	3.3	.2	MG/L
CONDUCTIVITY	CONDUCT	2	2	140	149.5	159	6	UMHO
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	2	2	.14	.17	.2	.1	MG/L
PH MEASUREMENT	PH	2	2	7.5	7.5	7.5	NA	PH
SULFATE	14808-79-8	2	2	12.5	13.15	13.8	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	2	2	72	82	92	5	MG/L

9513358.1598

TABLE A-1.3

LABORATORY DATA STATISTICAL REPORT
PLUTONIUM FINISHING PLANT WASTEWATER
Sample Location: SANITARY WATER (SAMPLER DISCRETION)
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	2	2	41	46	51	5	UG/L
ANTIMONY	7440-36-0	2	1	NA	NA	18.6	35	UG/L
ARSENIC	7440-38-2	2	2	2.5	2.65	2.8	*	UG/L
BARIUM	7440-39-3	2	2	23.5	27.35	31.2	1.1	UG/L
BERYLLIUM	7440-41-7	2	2	.3	.75	1.2	.3	UG/L
CADMIUM	7440-43-9	2	2	1.5	1.55	1.6	*	UG/L
CHROMIUM	7440-47-3	2	1	NA	NA	3.3	*	UG/L
COBALT	7440-48-4	2	2	2.5	2.7	2.9	10	UG/L
COPPER	7440-50-8	2	2	4	7.9	11.8	*	UG/L
LEAD	7439-92-1	2	1	NA	NA	10.9	*	UG/L
MERCURY	7439-97-6	2	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	2	2	4.2	4.45	4.7	*	UG/L
SILVER	7440-22-4	2	2	3.3	4.15	5	6	UG/L
TIN	7440-31-5	2	2	6.7	311.85	617	*	UG/L
VANADIUM	7440-62-2	2	2	2.6	2.6	2.6	*	UG/L
ZINC	7440-66-6	2	1	NA	NA	13.7	*	UG/L
ALKALINITY	ALKALINITY	2	2	42	43	44	.5	MG/L
CONDUCTIVITY	CONDUCT	2	2	134	142.5	151	6	UMHO
NITROGEN IN NITRATE	NO3-N	2	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	2	2	6.9	7.1	7.3	NA	PH
SULFATE	14808-79-8	2	2	18	21	24	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	2	2	84	85.5	87	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
MANHOLE 9	38	309
RAW WATER - MO-031	28	207
SANITARY WATER (SAMPLER DISCRETION)	22	274

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none). These data are used for statistical summary.

NA - Not applicable.

Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.

* - DL not specified

CASN - Chemical Abstract Service Number

TABLE A-2.1

LABORATORY DATA STATISTICAL REPORT
242-S EVAPORATOR STEAM CONDENSATE
Sample Location: PIPE DISCHARGE POINT TO 216-U-14 DITCH
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALUMINUM	7429-90-5	1	1	NA	NA	64	*	UG/L
ANTIMONY	7440-36-0	2	2	14.7	35.85	57	35	UG/L
ARSENIC	7440-38-2	2	2	1.5	1.75	2	*	UG/L
BARIUM	7440-39-3	2	2	10.3	22	33.7	1.1	UG/L
BERYLLIUM	7440-41-7	2	2	.4	.7	1	.3	UG/L
CADMIUM	7440-43-9	2	2	1.1	2.55	4	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	5470	91.8	UG/L
CHROMIUM	7440-47-3	2	1	NA	NA	7	*	UG/L
COBALT	7440-48-4	2	2	2.1	5.05	8	10	UG/L
COPPER	7440-50-8	2	1	NA	NA	67.8	*	UG/L
IRON	7439-89-6	1	1	NA	NA	110	*	UG/L
LEAD	7439-92-1	2	1	NA	NA	2	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	1140	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	8.6	*	UG/L
MERCURY	7439-97-6	2	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	2	2	6.5	12.75	19	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	877	*	UG/L
SELENIUM	7782-49-2	2	1	NA	NA	2	2	UG/L
SILVER	7440-22-4	2	2	3.6	5.3	7	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	482	*	UG/L
TIN	7440-31-5	2	1	NA	NA	12.6	*	UG/L
ZINC	7440-66-6	2	2	30	30.45	30.9	*	UG/L
PLUTONIUM-238	13981-16-3	2	1	NA	NA	.085	.01	PCI/L
PLUTONIUM-239/240	PU-239/240	1	1	NA	NA	.22	*	PCI/L
ALKALINITY	ALKALINITY	2	2	16.6	27.3	38	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	1	1	NA	NA	25	2	MG/L
CHLORIDE	12595-89-0	2	2	.87	2.34	3.8	.2	MG/L
CONDUCTIVITY	CONDUCT	2	2	36.2	79.6	123	6	UMHO
CYANIDE	57-12-5	1	1	NA	NA	20	10	UG/L
PH MEASUREMENT	PH	2	2	7.9	8	8.1	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	2	1	NA	NA	.022	.05	MG/L
TOTAL DISSOLVED SOLIDS	TDS	2	2	5	11.5	18	5	MG/L
TOTAL ORGANIC HALIDES	TOX	2	2	30.7	49.85	69	5	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
PIPE DISCHARGE POINT TO 216-U-14 DITCH	33	324

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

9513558.1599

TABLE A-3.1

LABORATORY DATA STATISTICAL REPORT
284-W POWERPLANT WASTEWATER
Sample Location: 282-W RESERVOIR
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	8	1	NA	NA	41	10	UG/L
ANTIMONY	7440-36-0	8	6	12.2	13.57	17.3	35	UG/L
ARSENIC	7440-38-2	8	2	2.1	2.45	2.8	*	UG/L
BARIUM	7440-39-3	8	6	28.6	30.78	33.4	1.1	UG/L
BERYLLIUM	7440-41-7	8	2	.2	.2	.2	.3	UG/L
CADMIUM	7440-43-9	8	4	1.3	1.45	1.9	*	UG/L
CHROMIUM	7440-47-3	8	3	2.1	2.1	2.1	*	UG/L
COBALT	7440-48-4	8	4	2.6	2.6	2.6	10	UG/L
COPPER	7440-50-8	8	5	1.6	5.22	10.3	*	UG/L
LEAD	7439-92-1	8	4	2.1	2.35	2.5	*	UG/L
MERCURY	7439-97-6	8	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	8	4	3.4	4.3	7	*	UG/L
SELENIUM	7782-49-2	8	1	NA	NA	3.1	2	UG/L
SILVER	7440-22-4	8	4	2.6	2.6	2.6	6	UG/L
THALLIUM	7440-28-0	8	1	NA	NA	3.8	*	UG/L
TIN	7440-31-5	8	2	5.5	5.5	5.5	*	UG/L
VANADIUM	7440-62-2	8	5	3.5	5.1	5.5	*	UG/L
ZINC	7440-66-6	8	3	5.8	99.63	277	*	UG/L
ALKALINITY	ALKALINITY	8	8	60	64.38	70	.5	MG/L
CHLORIDE	12595-89-0	8	8	.9	1.01	1.2	.2	MG/L
CONDUCTIVITY	CONDUCT	8	8	134	147.5	161	6	UMHO
CYANIDE	57-12-5	5	5	10	10	10	10	UG/L
FLUORIDE	7782-41-4	8	8	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	8	1	NA	NA	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	8	1	NA	NA	.25	.1	MG/L
PH MEASUREMENT	PH	8	8	7.8	8.29	8.7	NA	PH
SULFATE	14808-79-8	8	8	9	9.88	12	.25	MG/L
TOTAL ORGANIC CARBON	TOC	8	8	1.4	1.68	1.9	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	5	15.8	45.54	109	5	UG/L

TABLE A-3.2

LABORATORY DATA STATISTICAL REPORT
284-W POWERPLANT WASTEWATER
Sample Location: DRAWLINE SAM TAP, 2ND FLOOR 284 PWRHSE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BENZOIC ACID	65-85-0	8	7	66	228.57	440	50	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	8	1	NA	NA	32	10	UG/L
ANTIMONY	7440-36-0	8	6	12.2	13.38	14.7	35	UG/L
ARSENIC	7440-38-2	8	2	2.1	2.1	2.1	*	UG/L
BARIUM	7440-39-3	8	6	1.8	7.57	30.6	1.1	UG/L
BERYLLIUM	7440-41-7	8	5	.2	.3	.4	.3	UG/L
CADMIUM	7440-43-9	8	7	1.1	1.36	1.7	*	UG/L
CHROMIUM	7440-47-3	8	6	2.1	3.17	6.2	*	UG/L
COBALT	7440-48-4	8	7	2.6	7.27	16.2	10	UG/L
COPPER	7440-50-8	8	6	4.4	280.37	1050	*	UG/L
LEAD	7439-92-1	8	3	2.3	2.43	2.5	*	UG/L
MERCURY	7439-97-6	8	6	.1	.11	.17	3	UG/L
NICKEL	7440-02-0	8	8	3.4	4.43	6.5	*	UG/L
SELENIUM	7782-49-2	8	1	NA	NA	2.7	2	UG/L
SILVER	7440-22-4	8	8	2.1	2.73	3.6	6	UG/L
TIN	7440-31-5	8	5	5.5	8.9	12.6	*	UG/L
VANADIUM	7440-62-2	8	7	2.2	4.7	5.5	*	UG/L
ZINC	7440-66-6	8	5	12.4	24.22	53.7	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	8	2	9.9	15.95	22	.8	PCI/L
ALKALINITY	ALKALINITY	8	8	48	478.25	674	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	8	7	32	47.71	64	5	MG/L
CHLORIDE	12595-89-0	8	8	3.9	51.71	71.6	.2	MG/L
CONDUCTIVITY	CONDUCT	8	8	1150	3578.75	4650	6	UMHO
CYANIDE	57-12-5	5	5	10	10	10	10	UG/L
FLUORIDE	7782-41-4	8	8	.1	1.7	3.5	.1	MG/L
NITROGEN IN NITRATE	NO3-N	8	7	.3	.61	1.1	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	8	6	.14	.51	1.28	.1	MG/L
PH MEASUREMENT	PH	8	8	7.3	11.41	12.2	NA	PH
SULFATE	14808-79-8	8	8	19	533.63	868	.25	MG/L
TOTAL ORGANIC CARBON	TOC	8	8	11	15.25	18	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	8	24.2	62.88	148	5	UG/L

9513358.1600

TABLE A-3.3

LABORATORY DATA STATISTICAL REPORT
284-W POWERPLANT WASTEWATER
Sample Location: DRAWLINE SAM TAP, GRND FLOOR 284W PWRHSE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	8	8	10	22.88	37	5	UG/L
ANTIMONY	7440-36-0	8	5	12.2	13.32	15.7	35	UG/L
ARSENIC	7440-38-2	8	1	NA	NA	42	*	UG/L
BARIUM	7440-39-3	8	6	1200	1841.67	2520	1.1	UG/L
BERYLLIUM	7440-41-7	8	2	.2	.26	.31	.3	UG/L
CADMIUM	7440-43-9	8	5	1.3	2.34	4.6	*	UG/L
CHROMIUM	7440-47-3	8	5	2.1	3.02	4.6	*	UG/L
COBALT	7440-48-4	8	6	135	364.17	666	10	UG/L
COPPER	7440-50-8	8	8	42.3	87.3	141	*	UG/L
LEAD	7439-92-1	8	2	15.9	37.05	58.2	*	UG/L
MERCURY	7439-97-6	8	4	.1	.15	.3	3	UG/L
NICKEL	7440-02-0	8	6	9.9	38.42	84.7	*	UG/L
SILVER	7440-22-4	8	4	2.6	2.6	2.6	6	UG/L
TIN	7440-31-5	8	4	5.5	13.48	24.3	*	UG/L
VANADIUM	7440-62-2	8	6	2.2	4.93	5.5	*	UG/L
ZINC	7440-66-6	8	7	50.6	133.8	342	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	8	1	NA	NA	200	.8	PCI/L
ALKALINITY	ALKALINITY	8	8	3	10.88	28	.5	MG/L
AMMONIA (AS N)	7664-41-7	8	7	.05	.18	.32	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	8	8	160	331.25	820	5	MG/L
CHLORIDE	12595-89-0	8	8	12900	20112.5	26100	.2	MG/L
CONDUCTIVITY	CONDUCT	8	8	23900	48600	60400	6	UMHO
CYANIDE	57-12-5	5	5	10	10	10	10	UG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	8	1	NA	NA	.25	.1	MG/L
PH MEASUREMENT	PH	8	8	5.1	5.7	6.4	NA	PH
SULFATE	14808-79-8	8	8	31	43.13	58	.25	MG/L
TOTAL ORGANIC HALIDES	TOX	8	8	253	561.25	977	5	UG/L

TABLE A-3.4

LABORATORY DATA STATISTICAL REPORT
284-W POWERPLANT WASTEWATER
Sample Location: MANHOLE ABOVE DISCHARGE TO POND 284-WB
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	8	8	6	28	56	5	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	8	1	NA	NA	320	10	UG/L
ANTIMONY	7440-36-0	24	21	12.2	13.48	21.4	35	UG/L
ARSENIC	7440-38-2	24	13	1.5	3.62	11.5	*	UG/L
BARIUM	7440-39-3	24	15	28	126.74	705	1.1	UG/L
BERYLLIUM	7440-41-7	24	17	.2	.27	.4	.3	UG/L
CADMIUM	7440-43-9	24	20	1.1	1.36	1.7	*	UG/L
CHROMIUM	7440-47-3	24	16	2.1	3.6	13.2	*	UG/L
COBALT	7440-48-4	24	18	2.1	12.08	60.1	10	UG/L
COPPER	7440-50-8	24	6	2.5	27.47	53.6	*	UG/L
LEAD	7439-92-1	24	9	1.9	3.28	5	*	UG/L
MERCURY	7439-97-6	24	8	.1	.12	.22	3	UG/L
NICKEL	7440-02-0	24	18	3.4	5.68	19.5	*	UG/L
SELENIUM	7782-49-2	24	5	2.4	2.8	3.1	2	UG/L
SILVER	7440-22-4	24	15	2.1	2.8	3.6	6	UG/L
THALLIUM	7440-28-0	24	2	2.3	3.05	3.8	*	UG/L
TIN	7440-31-5	24	13	5.5	8.53	12.6	*	UG/L
VANADIUM	7440-62-2	24	20	2.2	4.33	7.2	*	UG/L
ZINC	7440-66-6	24	17	4.5	30.99	95.8	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	24	1	NA	NA	4.7	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	24	2	6.5	6.75	7	.8	PCI/L
ALKALINITY	ALKALINITY	24	24	52	92.55	310.1	.5	MG/L
AMMONIA (AS N)	7664-41-7	24	6	.05	.09	.25	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	24	5	30	102.4	260	5	MG/L
CHLORIDE	12595-89-0	24	24	2.1	621.78	6900	.2	MG/L
CONDUCTIVITY	CONDUCT	24	24	116	2151.46	21200	6	UMHO
CYANIDE	57-12-5	5	5	10	10	10	10	UG/L
FLUORIDE	7782-41-4	24	18	.1	.15	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	24	7	.2	.2	.2	.2	MG/L
PH MEASUREMENT	PH	24	23	6.7	8.24	9.4	NA	PH
SULFATE	14808-79-8	24	24	16	21.5	27	.25	MG/L
TOTAL ORGANIC CARBON	TOC	24	23	1	2.1	6	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	8	48.7	368.09	1000	5	UG/L

9513358.1601

TABLE A-3.5

LABORATORY DATA STATISTICAL REPORT
284-W POWERPLANT WASTEWATER
Sample Location: MANHOLE DOWNSTRM 284-W PWRHSE COMBO EFF
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	8	2	13	16.5	20	10	UG/L
METHYLENE CHLORIDE	75-09-2	8	1	NA	NA	5	5	UG/L
ANTIMONY	7440-36-0	8	5	12.2	12.62	12.9	35	UG/L
ARSENIC	7440-38-2	8	4	1.8	1.98	2.1	*	UG/L
BARIUM	7440-39-3	8	6	32.6	39.05	63.1	1.1	UG/L
BERYLLIUM	7440-41-7	8	2	.2	.2	.2	.3	UG/L
CADMIUM	7440-43-9	8	3	1.3	1.3	1.3	*	UG/L
CHROMIUM	7440-47-3	8	3	2.1	2.1	2.1	*	UG/L
COBALT	7440-48-4	8	4	2.6	2.6	2.6	10	UG/L
COPPER	7440-50-8	8	4	4.3	7.05	12.6	*	UG/L
LEAD	7439-92-1	8	4	2	2.68	3.6	*	UG/L
MERCURY	7439-97-6	8	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	8	4	3.4	3.4	3.4	*	UG/L
SELENIUM	7782-49-2	8	1	NA	NA	3.1	2	UG/L
SILVER	7440-22-4	8	5	2.6	2.8	3.6	6	UG/L
TIN	7440-31-5	8	2	5.5	5.5	5.5	*	UG/L
VANADIUM	7440-62-2	8	4	5.5	5.5	5.5	*	UG/L
ZINC	7440-66-6	8	2	11.7	42.9	74.1	*	UG/L
ALKALINITY	ALKALINITY	8	8	62	64	68	.5	MG/L
AMMONIA (AS N)	7664-41-7	8	1	NA	NA	.06	.05	MG/L
CHLORIDE	12595-89-0	8	8	1.2	1.29	1.5	.2	MG/L
CONDUCTIVITY	CONDUCT	8	8	144	155	168	6	UMHO
CYANIDE	57-12-5	5	5	10	10	10	10	UG/L
FLUORIDE	7782-41-4	8	6	.1	.15	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	8	2	.2	.2	.2	.2	MG/L
PH MEASUREMENT	PH	8	8	.1	7.36	8.7	NA	PH
SULFATE	14808-79-8	8	8	11	11.75	13	.25	MG/L
TOTAL ORGANIC CARBON	TOC	8	8	1.3	1.75	2.4	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	8	28.9	45.61	62.9	5	UG/L

TABLE A-3.6

LABORATORY DATA STATISTICAL REPORT
284-W POWERPLANT WASTEWATER
Sample Location: MANHOLE OUTSIDE 283-W WATER TRMT PLANT
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	8	8	20	41	54	5	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	8	1	NA	NA	48	10	UG/L
ANTIMONY	7440-36-0	8	5	12.2	12.62	12.9	35	UG/L
ARSENIC	7440-38-2	8	3	2.5	11.23	21.3	*	UG/L
BARIUM	7440-39-3	8	6	30	34.77	46.3	1.1	UG/L
BERYLLIUM	7440-41-7	8	2	.2	.2	.2	.3	UG/L
CADMIUM	7440-43-9	8	3	1.3	1.3	1.3	*	UG/L
CHROMIUM	7440-47-3	8	5	2.1	7.56	25.1	*	UG/L
COBALT	7440-48-4	8	4	2.6	2.6	2.6	10	UG/L
COPPER	7440-50-8	8	4	6.6	19.23	43.6	*	UG/L
LEAD	7439-92-1	8	4	2.5	2.98	3.6	*	UG/L
MERCURY	7439-97-6	8	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	8	4	3.4	3.78	4.9	*	UG/L
SELENIUM	7782-49-2	8	2	2.4	2.75	3.1	2	UG/L
SILVER	7440-22-4	8	4	2.6	2.6	2.6	6	UG/L
THALLIUM	7440-28-0	8	1	NA	NA	3.8	*	UG/L
TIN	7440-31-5	8	2	5.5	6.45	7.4	*	UG/L
VANADIUM	7440-62-2	8	6	2.6	6.2	13.4	*	UG/L
ZINC	7440-66-6	8	5	9	28.26	61.2	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	8	4	3	5.18	10	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	8	1	NA	NA	6.9	.8	PCI/L
ALKALINITY	ALKALINITY	8	8	48	53.75	59	.5	MG/L
AMMONIA (AS N)	7664-41-7	8	2	.06	.06	.06	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	8	2	48	69	90	5	MG/L
CHLORIDE	12595-89-0	8	8	2.4	3.68	4.9	.2	MG/L
CONDUCTIVITY	CONDUCT	8	8	135	153.63	170	6	UMHO
CYANIDE	57-12-5	5	5	10	10	10	10	UG/L
FLUORIDE	7782-41-4	8	5	.1	.14	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	8	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	8	8	.1	6.53	7.6	NA	PH
SULFATE	14808-79-8	8	8	15	19	24	.25	MG/L
TOTAL ORGANIC CARBON	TOC	8	8	1	3.44	8.4	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	8	166	566.38	1130	5	UG/L

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TABLE A-3.7

LABORATORY DATA STATISTICAL REPORT
284-W POWERPLANT WASTEWATER
Sample Location: SAMPLE TAP MUD DRUM BLOWDWN BEHIND 284W
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BENZOIC ACID	65-85-0	8	7	75	206.86	430	50	UG/L
ANTIMONY	7440-36-0	8	6	12.9	14.32	17.8	35	UG/L
ARSENIC	7440-38-2	8	2	2.1	3.4	4.7	*	UG/L
BARIUM	7440-39-3	8	6	3	3.53	4	1.1	UG/L
BERYLLIUM	7440-41-7	8	5	.2	.3	.4	.3	UG/L
CADMIUM	7440-43-9	8	6	1.1	1.3	1.7	*	UG/L
CHROMIUM	7440-47-3	8	6	2.1	2.98	5.8	*	UG/L
COBALT	7440-48-4	8	6	2.1	11.52	38.1	10	UG/L
COPPER	7440-50-8	8	7	36.2	81.5	140	*	UG/L
LEAD	7439-92-1	8	4	18.5	71.58	164	*	UG/L
MERCURY	7439-97-6	8	6	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	8	7	3.4	4.43	6.5	*	UG/L
SELENIUM	7782-49-2	8	2	2.4	2.45	2.5	2	UG/L
SILVER	7440-22-4	8	7	2.1	2.81	3.6	6	UG/L
TIN	7440-31-5	8	4	5.5	9.05	12.6	*	UG/L
VANADIUM	7440-62-2	8	6	2.2	4.62	5.5	*	UG/L
ZINC	7440-66-6	8	5	22.9	56.82	125	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	8	2	8.8	8.85	8.9	.8	PCI/L
ALKALINITY	ALKALINITY	8	8	189	459.63	709	.5	MG/L
AMMONIA (AS N)	7664-41-7	8	1	NA	NA	.33	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	8	5	39	47.8	56	5	MG/L
CHLORIDE	12595-89-0	8	8	20	50.3	73.8	.2	MG/L
CONDUCTIVITY	CONDUCT	8	8	1410	4112.5	9050	6	UMHO
CYANIDE	57-12-5	5	5	10	10	10	10	UG/L
FLUORIDE	7782-41-4	8	7	.9	1.63	3.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	8	8	.2	.5	1.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	8	5	.11	.54	1.23	.1	MG/L
PH MEASUREMENT	PH	8	8	11.4	11.83	12.2	NA	PH
SULFATE	14808-79-8	8	8	297	488.63	876	.25	MG/L
TOTAL ORGANIC CARBON	TOC	8	8	5.3	12.89	17	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	6	29.7	99.52	164	5	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
282-W RESERVOIR	29	257
DRAWLINE SAM TAP, 2ND FLOOR 284 PWRHSE	31	257
DRAWLINE SAM TAP, GRND FLOOR 284W PWRHSE	27	257
MANHOLE ABOVE DISCHARGE TO POND 284-WB	33	257
MANHOLE DOWNSTRM 284-W PWRHSE COMBO EFF	29	257
MANHOLE OUTSIDE 283-W WATER TRMT PLANT	33	257
SAMPLE TAP MUD DRUM BLOWDWN BEHIND 284W	31	257

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

TABLE A-4.1

LABORATORY DATA STATISTICAL REPORT
T PLANT WASTEWATER
Sample Location: 216-T-4-2 DITCH NEAR PIPE OUTFLOW
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	4	1	NA	NA	5	5	UG/L
ALUMINUM	7429-90-5	4	1	NA	NA	55	*	UG/L
BARIUM	7440-39-3	4	4	29.1	30.08	31.9	1.1	UG/L
BORON	7440-42-8	4	1	NA	NA	24.5	115	UG/L
CADMIUM	7440-43-9	4	4	1.1	1.4	1.7	*	UG/L
CALCIUM	7440-70-2	4	4	18300	20025	21200	91.8	UG/L
IRON	7439-89-6	4	3	72.7	103.9	164	*	UG/L
MAGNESIUM	7439-95-4	4	4	4050	4520	4930	*	UG/L
MANGANESE	7439-96-5	4	4	1.4	2.88	4.8	*	UG/L
MERCURY	7439-97-6	4	2	.1	.1	.1	3	UG/L
POTASSIUM	7440-09-7	4	4	648	823.5	900	*	UG/L
SILICON	7440-21-3	4	2	1390	2090	2790	*	UG/L
SODIUM	7440-23-5	4	3	2340	2543.33	2840	*	UG/L
STRONTIUM	7440-24-6	4	3	85.3	93.17	97.3	*	UG/L
TITANIUM	7440-32-6	4	2	1.2	1.2	1.2	*	UG/L
ZINC	7440-66-6	4	3	6.8	7.43	8.4	*	UG/L
ZIRCONIUM	7440-67-7	4	4	88	100	121	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	4	9	27.75	40	.8	PCI/L
CESIUM-137	10045-97-3	4	3	38	43.67	47	*	PCI/L
TOTAL URANIUM	7440-61-1	4	1	NA	NA	.5	.02	UG/L
CHLORIDE	12595-89-0	4	4	.9	3.53	5.9	.2	MG/L
FLUORIDE	7782-41-4	4	4	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	4	.2	.2	.2	.2	MG/L
PH MEASUREMENT	PH	4	4	7.7	7.88	8.1	NA	PH
SULFATE	14808-79-8	4	4	10	18	23	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	44	62.5	71	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	2	1.1	1.2	1.3	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	3	54	93.53	145	5	UG/L

TABLE A-4.2

LABORATORY DATA STATISTICAL REPORT
T PLANT WASTEWATER
Sample Location: RAW WATER - SAMPLER DISCRETION
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALUMINUM	7429-90-5	4	2	20.9	21.85	22.8	*	UG/L
BARIUM	7440-39-3	4	4	25.3	32.05	36.1	1.1	UG/L
BORON	7440-42-8	4	2	13.8	19.35	24.9	115	UG/L
CADMIUM	7440-43-9	4	4	1.1	3.18	8.4	*	UG/L
CALCIUM	7440-70-2	4	4	17500	20000	22000	91.8	UG/L
COPPER	7440-50-8	4	1	NA	NA	6	*	UG/L
IRON	7439-89-6	4	3	24	66.63	94.6	*	UG/L
MAGNESIUM	7439-95-4	4	4	4030	4485	5200	*	UG/L
MANGANESE	7439-96-5	4	4	1.1	6.25	16.4	*	UG/L
MERCURY	7439-97-6	4	2	.1	.1	.1	3	UG/L
POTASSIUM	7440-09-7	4	4	725	788.5	835	*	UG/L
SILICON	7440-21-3	4	2	2160	2810	3460	*	UG/L
SODIUM	7440-23-5	4	3	2270	2483.33	2680	*	UG/L
STRONTIUM	7440-24-6	4	3	84.1	94	102	*	UG/L
TITANIUM	7440-32-6	4	2	1.2	1.6	2	*	UG/L
ZINC	7440-66-6	4	3	4.8	23.7	55.1	*	UG/L
ZIRCONIUM	7440-67-7	4	4	88	88	88	*	UG/L
TOTAL RADIUM	TTL RADIUM	4	1	NA	NA	.4	.2	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.18	.34	.56	.02	UG/L
CHLORIDE	12595-89-0	4	4	.9	.93	1	.2	MG/L
FLUORIDE	7782-41-4	4	4	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	4	.2	.25	.3	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	2	.29	.34	.38	.1	MG/L
PH MEASUREMENT	PH	4	4	7.8	7.9	8	NA	PH
SULFATE	14808-79-8	4	4	7	8.5	9	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	54	96.25	201	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	3	1.3	1.67	1.9	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	3	8.2	12.67	20.6	5	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
216-T-4-2 DITCH NEAR PIPE OUTFLOW	28	113
RAW WATER - SAMPLER DISCRETION	28	225

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none). These data are used for statistical summary.

NA - Not applicable.

Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.

* - DL not specified

CASN - Chemical Abstract Service Number

TABLE A-5.1

LABORATORY DATA STATISTICAL REPORT
T PLANT LABORATORY WASTEWATER
Sample Location: INLET TO 216-T-1 DITCH
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	3	1	NA	NA	16	5	UG/L
ALUMINUM	7429-90-5	3	2	107	154	201	*	UG/L
BARIUM	7440-39-3	3	3	6.3	15.17	28.5	1.1	UG/L
BORON	7440-42-8	3	1	NA	NA	18	115	UG/L
CADMIUM	7440-43-9	3	3	1.5	1.63	1.7	*	UG/L
CALCIUM	7440-70-2	3	2	2990	10145	17300	91.8	UG/L
COPPER	7440-50-8	3	1	NA	NA	14.8	*	UG/L
IRON	7439-89-6	3	2	382	846	1310	*	UG/L
LEAD	7439-92-1	2	1	NA	NA	11.4	*	UG/L
MAGNESIUM	7439-95-4	3	3	425	1624.67	3890	*	UG/L
MANGANESE	7439-96-5	3	2	86.7	95.35	104	*	UG/L
MERCURY	7439-97-6	3	1	NA	NA	.1	3	UG/L
POTASSIUM	7440-09-7	3	3	58.8	471.27	723	*	UG/L
SILICON	7440-21-3	3	2	736	1708	2680	*	UG/L
SILVER	7440-22-4	1	1	NA	NA	2.1	6	UG/L
SODIUM	7440-23-5	3	3	248	1192.67	2730	*	UG/L
STRONTIUM	7440-24-6	3	3	11.4	35.6	81.8	*	UG/L
TITANIUM	7440-32-6	3	3	1.2	5.4	10.6	*	UG/L
VANADIUM	7440-62-2	1	1	NA	NA	2.4	*	UG/L
ZINC	7440-66-6	3	3	109	134.33	183	*	UG/L
ZIRCONIUM	7440-67-7	3	2	88	88	88	*	UG/L
RADIUM-226	13982-63-3	3	1	NA	NA	26	.3	PCI/L
THORIUM-228	14274-82-9	3	1	NA	NA	20	8	PCI/L
TOTAL URANIUM	7440-61-1	3	1	NA	NA	.29	.02	UG/L
CHLORIDE	12595-89-0	3	3	.3	1.23	3	.2	MG/L
FLUORIDE	7782-41-4	3	1	NA	NA	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	3	3	6.8	7	7.3	NA	PH
SULFATE	14808-79-8	3	3	2	9	23	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	3	1	NA	NA	70	5	MG/L
TOTAL ORGANIC CARBON	TOC	3	2	1.2	1.4	1.6	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	3	3	24.4	232.47	563	5	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
INLET TO 216-T-1 DITCH	32	229

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.

NA - Not applicable.

Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.

* - DL not specified

CASN - Chemical Abstract Service Number

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TABLE A-6.1

LABORATORY DATA STATISTICAL REPORT
222-S LABORATORY WASTEWATER
Sample Location: HATCHES, WESTEND OF 207-SL RET BASINS
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	4	3	1.8	7.37	17.9	35	UG/L
ARSENIC	7440-38-2	4	3	1.5	2.1	2.7	*	UG/L
BARIUM	7440-39-3	4	4	13.8	17.5	22.8	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.1	.28	.4	.3	UG/L
CADMIUM	7440-43-9	4	4	1	1.23	1.5	*	UG/L
CHROMIUM	7440-47-3	4	3	2.1	3.4	5.6	*	UG/L
COBALT	7440-48-4	4	3	2	2.23	2.6	10	UG/L
COPPER	7440-50-8	4	4	166	278	396	*	UG/L
LEAD	7439-92-1	4	3	3.6	4.4	5	*	UG/L
MERCURY	7439-97-6	4	2	.1	.11	.11	3	UG/L
NICKEL	7440-02-0	4	4	3.4	4.58	6.5	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	3.7	2	UG/L
SILVER	7440-22-4	4	4	2.6	3.43	4.1	6	UG/L
THALLIUM	7440-28-0	4	1	NA	NA	1.8	*	UG/L
TIN	7440-31-5	4	3	12.6	214.2	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.2	3.13	5.5	*	UG/L
ZINC	7440-66-6	4	4	50	79.8	155	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	1	NA	NA	4.1	.8	PCI/L
THORIUM-228	14274-82-9	4	1	NA	NA	19	8	PCI/L
AMERICIUM-241	14596-10-2	4	3	.32	.63	1.2	*	PCI/L
TOTAL URANIUM	7440-61-1	4	2	.13	.2	.27	.02	UG/L
ALKALINITY	ALKALINITY	4	4	17	22.5	28	.5	MG/L
CHLORIDE	12595-89-0	4	4	1.6	3.05	6.3	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	55	92.5	138	6	UMHO
CYANIDE	57-12-5	3	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	2	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	4	.7	1.18	2.6	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	4	.56	1.18	2.56	.1	MG/L
OIL & GREASE	OIL&GREASE	4	1	NA	NA	5	5	MG/L
PH MEASUREMENT	PH	4	4	7.4	7.53	7.6	NA	PH
SULFATE	14808-79-8	4	4	5	10.75	19	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	28	65	92	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	2	1	2.75	4.5	.5	MG/L

TABLE A-6.2

LABORATORY DATA STATISTICAL REPORT
222-S LABORATORY WASTEWATER
Sample Location: SANITARY WATER (SAMPLERS DESCRETION)
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	2	2	29	40.5	52	5	UG/L
ANTIMONY	7440-36-0	2	1	NA	NA	17.9	35	UG/L
ARSENIC	7440-38-2	2	2	2.1	2.4	2.7	*	UG/L
BARIUM	7440-39-3	2	2	30.8	33.05	35.3	1.1	UG/L
BERYLLIUM	7440-41-7	2	2	.2	.3	.4	.3	UG/L
CADMIUM	7440-43-9	2	2	1.3	1.4	1.5	*	UG/L
CHROMIUM	7440-47-3	2	1	NA	NA	2.2	*	UG/L
COBALT	7440-48-4	2	1	NA	NA	2.6	10	UG/L
COPPER	7440-50-8	2	2	8	10.65	13.3	*	UG/L
LEAD	7439-92-1	2	1	NA	NA	2.7	*	UG/L
NICKEL	7440-02-0	2	2	3.4	3.55	3.7	*	UG/L
SELENIUM	7782-49-2	2	2	2.4	3.05	3.7	2	UG/L
SILVER	7440-22-4	2	2	2.6	3	3.4	6	UG/L
TIN	7440-31-5	2	2	13	315	617	*	UG/L
VANADIUM	7440-62-2	2	2	2.3	4.9	7.5	*	UG/L
ZINC	7440-66-6	2	2	164	209.5	255	*	UG/L
THORIUM-228	14274-82-9	2	2	22	22	22	8	PCI/L
TOTAL URANIUM	7440-61-1	2	1	NA	NA	.6	.02	UG/L
ALKALINITY	ALKALINITY	2	2	38	43.5	49	.5	MG/L
CHLORIDE	12595-89-0	2	2	3.2	4.4	5.6	.2	MG/L
CONDUCTIVITY	CONDUCT	2	2	131	140	149	6	UMHO
CYANIDE	57-12-5	2	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	2	1	NA	NA	.2	.1	MG/L
PH MEASUREMENT	PH	2	2	7.2	7.25	7.3	NA	PH
SULFATE	14808-79-8	2	2	18	20	22	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	2	2	78	81	84	5	MG/L
TOTAL ORGANIC CARBON	TOC	2	2	1.4	1.4	1.4	.5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
HATCHES, WESTEND OF 207-SL RET BASINS	33	284
SANITARY WATER (SAMPLERS DESCRETION)	27	281

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.

NA - Not applicable.

Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.

* - DL not specified

CASN - Chemical Abstract Service Number

9513358.1605

TABLE A-7.1

LABORATORY DATA STATISTICAL REPORT
PUREX PLANT CHEMICAL SEWER
Sample Location: 216-A-42 RETENTION BASIN
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	1	1	NA	NA	12.2	35	UG/L
BERYLLIUM	7440-41-7	1	1	NA	NA	.3	.3	UG/L
CADMIUM	7440-43-9	1	1	NA	NA	1.7	*	UG/L
CHROMIUM	7440-47-3	1	1	NA	NA	2.5	*	UG/L
COBALT	7440-48-4	1	1	NA	NA	2.9	10	UG/L
LEAD	7439-92-1	1	1	NA	NA	1.9	*	UG/L
NICKEL	7440-02-0	1	1	NA	NA	4.4	*	UG/L
TIN	7440-31-5	1	1	NA	NA	8.3	*	UG/L
VANADIUM	7440-62-2	1	1	NA	NA	2.4	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	1	1	NA	NA	110	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	1	1	NA	NA	820	.8	PCI/L
STRONTIUM-90	10098-97-2	1	1	NA	NA	64	*	PCI/L
CESIUM-137	10045-97-3	1	1	NA	NA	720	*	PCI/L
URANIUM-235	15117-96-1	1	1	NA	NA	3.3	*	PCI/L
PLUTONIUM-238	13981-16-3	1	1	NA	NA	4.4	.01	PCI/L
URANIUM-238	U-238	1	1	NA	NA	14	.06	PCI/L
AMERICIUM-241	14596-10-2	1	1	NA	NA	4.6	*	PCI/L
PLUTONIUM-241	PU-241	1	1	NA	NA	420	.04	PCI/L
URANIUM-233/234	U-233/234	1	1	NA	NA	22	.08	PCI/L
PLUTONIUM-239/240	PU-239/240	1	1	NA	NA	55	*	PCI/L
TOTAL RADIUM	TTL RADIUM	1	1	NA	NA	1.3	.2	PCI/L
TOTAL URANIUM	7440-61-1	1	1	NA	NA	41	.02	UG/L
ALKALINITY	ALKALINITY	1	1	NA	NA	39	.5	MG/L
CHLORIDE	12595-89-0	1	1	NA	NA	.5	.2	MG/L
CONDUCTIVITY	CONDUCT	1	1	NA	NA	87	6	UMHO
NITROGEN IN NITRATE	NO3-N	1	1	NA	NA	.4	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	1	1	NA	NA	.46	.1	MG/L
PH MEASUREMENT	PH	1	1	NA	NA	7.6	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	1	1	NA	NA	45	5	MG/L
TOTAL ORGANIC HALIDES	TOX	1	1	NA	NA	7	5	UG/L

TABLE A-7.2

LABORATORY DATA STATISTICAL REPORT
PUREX PLANT CHEMICAL SEWER
Sample Location: RAW WATER - 202-A BLDG P&O GALLERY
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	20	10	UG/L
ALUMINUM	7429-90-5	1	1	NA	NA	22.8	*	UG/L
ANTIMONY	7440-36-0	4	3	2.4	9.77	14.7	35	UG/L
ARSENIC	7440-38-2	4	3	1.3	1.5	1.7	*	UG/L
BARIUM	7440-39-3	4	3	28.2	29.97	30.9	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.3	.37	.4	.3	UG/L
CADMIUM	7440-43-9	4	3	1.3	1.5	1.7	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	19000	91.8	UG/L
CHROMIUM	7440-47-3	4	3	1.8	2.13	2.5	*	UG/L
COBALT	7440-48-4	4	4	1.5	2.28	2.9	10	UG/L
COPPER	7440-50-8	4	4	57.1	107.03	141	*	UG/L
LEAD	7439-92-1	4	2	8.9	23.05	37.2	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	4310	*	UG/L
MERCURY	7439-97-6	4	2	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	3	3.7	4.87	6.5	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	862	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	2	3.4	3.5	3.6	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	2690	*	UG/L
THALLIUM	7440-28-0	3	1	NA	NA	1.5	*	UG/L
TIN	7440-31-5	4	3	8.3	606.97	1800	*	UG/L
VANADIUM	7440-62-2	4	3	2.3	3.4	5.5	*	UG/L
ZINC	7440-66-6	4	1	NA	NA	50.8	*	UG/L
URANIUM-238	U-238	4	4	.21	.23	.26	.06	PCI/L
URANIUM-233/234	U-233/234	4	4	.21	.3	.48	.08	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.48	.56	.64	.02	UG/L
ALKALINITY	ALKALINITY	4	4	59	61.75	67	.5	MG/L
CHLORIDE	12595-89-0	4	4	.8	1	1.2	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	130	140.5	157	6	UMHO
CYANIDE	57-12-5	2	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	4	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	2	.2	.2	.2	.2	MG/L
PH MEASUREMENT	PH	4	4	8	8.28	8.5	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	4	4	67	83.25	100	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1	1.63	2.4	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	2	13.7	17.8	21.9	5	UG/L

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TABLE A-7.3

LABORATORY DATA STATISTICAL REPORT
PUREX PLANT CHEMICAL SEWER
Sample Location: SANITARY WATER BACKGROUND SAMPLE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	3	3	37	53.67	66	5	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	41	10	UG/L
ANTIMONY	7440-36-0	4	3	2	9.63	14.7	35	UG/L
ARSENIC	7440-38-2	4	3	1.3	1.5	1.7	*	UG/L
BARIUM	7440-39-3	4	3	27.3	29.6	30.9	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.3	.37	.4	.3	UG/L
CADMIUM	7440-43-9	4	3	1.3	1.5	1.7	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	18900	91.8	UG/L
CHROMIUM	7440-47-3	4	3	1.8	2.13	2.5	*	UG/L
COBALT	7440-48-4	4	3	2.1	2.53	2.9	10	UG/L
LEAD	7439-92-1	4	2	2.6	4.15	5.7	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	4280	*	UG/L
MERCURY	7439-97-6	4	2	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	3	4.4	5.43	6.5	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	799	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	2	3.4	3.5	3.6	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	2640	*	UG/L
THALLIUM	7440-28-0	3	1	NA	NA	1.5	*	UG/L
TIN	7440-31-5	4	3	8.3	506.97	1500	*	UG/L
VANADIUM	7440-62-2	4	3	2.3	3.4	5.5	*	UG/L
ZINC	7440-66-6	4	2	64.4	72.95	81.5	*	UG/L
AMERICIUM-241	14596-10-2	4	1	NA	NA	.05	*	PCI/L
ALKALINITY	ALKALINITY	4	4	42	49	57	.5	MG/L
CHLORIDE	12595-89-0	4	4	3.4	3.88	4.8	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	137	148.25	163	6	UMHO
CYANIDE	57-12-5	2	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	3	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	4	4	7.1	7.3	7.5	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	4	4	81	94.75	114	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	2	1.3	1.45	1.6	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	4	122	209	262	5	UG/L

TABLE A-7.4

LABORATORY DATA STATISTICAL REPORT
PUREX PLANT CHEMICAL SEWER
Sample Location: SCD CATCH TANK 202-A-417
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	1	1	NA	NA	14.7	35	UG/L
ARSENIC	7440-38-2	1	1	NA	NA	1.5	*	UG/L
BARIUM	7440-39-3	1	1	NA	NA	20.2	1.1	UG/L
BERYLLIUM	7440-41-7	1	1	NA	NA	.4	.3	UG/L
COBALT	7440-48-4	1	1	NA	NA	2.1	10	UG/L
COPPER	7440-50-8	1	1	NA	NA	635	*	UG/L
MERCURY	7439-97-6	1	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	1	1	NA	NA	6.5	*	UG/L
SILVER	7440-22-4	1	1	NA	NA	3.6	6	UG/L
THALLIUM	7440-28-0	1	1	NA	NA	1.5	*	UG/L
TIN	7440-31-5	1	1	NA	NA	12.6	*	UG/L
ZINC	7440-66-6	1	1	NA	NA	367	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	1	1	NA	NA	9.5	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	1	1	NA	NA	13	.8	PCI/L
STRONTIUM-90	10098-97-2	1	1	NA	NA	3	*	PCI/L
AMERICIUM-241	14596-10-2	1	1	NA	NA	.15	*	PCI/L
PLUTONIUM-241	PU-241	1	1	NA	NA	190	.04	PCI/L
PLUTONIUM-239/240	PU-239/240	1	1	NA	NA	6.9	*	PCI/L
ALKALINITY	ALKALINITY	1	1	NA	NA	3	.5	MG/L
CONDUCTIVITY	CONDUCT	1	1	NA	NA	7	6	UMHO
PH MEASUREMENT	PH	1	1	NA	NA	6.7	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	1	1	NA	NA	26	5	MG/L

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TABLE A-7.5

LABORATORY DATA STATISTICAL REPORT
PUREX PLANT CHEMICAL SEWER
Sample Location: STEAM TRAP AND FRENCH DRAIN NW OF PUREX
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	4	1	NA	NA	35	10	UG/L
ALUMINUM	7429-90-5	1	1	NA	NA	22.8	*	UG/L
ANTIMONY	7440-36-0	4	3	2	9.63	14.7	35	UG/L
ARSENIC	7440-38-2	4	3	1.3	1.5	1.7	*	UG/L
BARIUM	7440-39-3	4	3	.8	1	1.2	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.3	.37	.4	.3	UG/L
CADMIUM	7440-43-9	4	3	1.3	1.5	1.7	*	UG/L
CHROMIUM	7440-47-3	4	3	1.8	2.13	2.5	*	UG/L
COBALT	7440-48-4	4	3	2.1	2.53	2.9	10	UG/L
COPPER	7440-50-8	4	3	2.2	104.97	310	*	UG/L
LEAD	7439-92-1	4	3	11.7	17.6	26.2	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	26.6	*	UG/L
MERCURY	7439-97-6	4	3	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	3	3.7	5.63	8.8	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	85.5	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	3	2.1	3.03	3.6	6	UG/L
THALLIUM	7440-28-0	3	3	1.5	2.33	3.8	*	UG/L
TIN	7440-31-5	4	4	8.3	584.48	1700	*	UG/L
VANADIUM	7440-62-2	4	3	2.3	3.4	5.5	*	UG/L
ZINC	7440-66-6	4	1	NA	NA	10.6	*	UG/L
THORIUM-228	14274-82-9	4	1	NA	NA	18	8	PCI/L
PLUTONIUM-239/240	PU-239/240	4	1	NA	NA	.74	*	PCI/L
AMMONIA (AS N)	7664-41-7	4	1	NA	NA	.07	.05	MG/L
CYANIDE	57-12-5	2	2	10	10	10	10	UG/L
PH MEASUREMENT	PH	4	4	4.9	5.63	5.9	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	4	1	NA	NA	31	5	MG/L

TABLE A-7.6

LABORATORY DATA STATISTICAL REPORT
PUREX PLANT CHEMICAL SEWER
Sample Location: VALVE 213 ON CONT. MONITOR APPAR 295-AC
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	4	1	NA	NA	15	10	UG/L
CHLOROFORM	67-66-3	4	4	22	36.75	50	5	UG/L
ANTIMONY	7440-36-0	4	3	2.2	9.7	14.7	35	UG/L
ARSENIC	7440-38-2	4	3	1.3	1.5	1.7	*	UG/L
BARIUM	7440-39-3	4	3	28	29.97	31.3	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.3	.37	.4	.3	UG/L
CADMIUM	7440-43-9	4	3	1.3	1.5	1.7	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	18800	91.8	UG/L
CHROMIUM	7440-47-3	4	3	1.8	2.13	2.5	*	UG/L
COBALT	7440-48-4	4	3	2.1	2.53	2.9	10	UG/L
COPPER	7440-50-8	4	1	NA	NA	55.1	*	UG/L
LEAD	7439-92-1	4	3	1.9	2.33	2.7	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	4320	*	UG/L
MERCURY	7439-97-6	4	2	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	3	3.7	4.87	6.5	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	808	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	2	3.4	3.5	3.6	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	2640	*	UG/L
THALLIUM	7440-28-0	3	2	1.5	2.65	3.8	*	UG/L
TIN	7440-31-5	4	3	8.3	673.63	2000	*	UG/L
VANADIUM	7440-62-2	4	3	2.3	3.4	5.5	*	UG/L
URANIUM-238	U-238	4	1	NA	NA	.17	.06	PCI/L
URANIUM-233/234	U-233/234	4	1	NA	NA	.18	.08	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.2	.29	.44	.02	UG/L
ALKALINITY	ALKALINITY	4	4	48	53	60	.5	MG/L
CHLORIDE	12595-89-0	4	4	1.9	2.75	3.5	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	134	142.5	154	6	UMHO
CYANIDE	57-12-5	2	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	4	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	4	4	7.6	7.68	7.8	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	4	4	70	84.75	112	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1.1	1.83	2.6	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	4	117	192	258	5	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
216-A-42 RETENTION BASIN	30	285
RAW WATER - 202-A BLDG P&O GALLERY	36	296
SANITARY WATER BACKGROUND SAMPLE	33	297
SCD CATCH TANK 202-A-417	22	288
STEAM TRAP AND FRENCH DRAIN NW OF PUREX	27	296
VALVE 213 ON CONT. MONITOR APPAR 295-AC	35	296

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

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TABLE A-8.1

LABORATORY DATA STATISTICAL REPORT
U03 PLANT PROCESS CONDENSATE
Sample Location: TK-C5 DISCHARGE LINE TO 216-U-17 CRIB
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	4	1	NA	NA	59	10	UG/L
AROCHLOR 1016	12674-11-2	4	1	NA	NA	1	.5	UG/L
2-BUTANONE	78-93-3	4	1	NA	NA	14	10	UG/L
2,4-DINITROPHENOL	51-28-5	4	1	NA	NA	78	25	UG/L
METHOXYCHLOR	72-43-5	4	1	NA	NA	.5	.048	UG/L
ANTIMONY	7440-36-0	4	3	17.9	18.37	18.6	35	UG/L
BARIUM	7440-39-3	4	3	4.8	5.37	5.7	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.3	.33	.4	.3	UG/L
CADMIUM	7440-43-9	4	3	1.4	1.43	1.5	*	UG/L
CHROMIUM	7440-47-3	4	4	16.4	46.58	81.7	*	UG/L
COBALT	7440-48-4	4	2	2.9	2.9	2.9	10	UG/L
COPPER	7440-50-8	4	1	NA	NA	2.7	*	UG/L
LEAD	7439-92-1	4	1	NA	NA	3.6	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	4.2	*	UG/L
MERCURY	7439-97-6	4	4	.1	4.13	9.1	3	UG/L
NICKEL	7440-02-0	4	3	17.8	25.43	35.8	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	405000	*	UG/L
SILVER	7440-22-4	4	3	3.4	6.77	12.6	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	2360	*	UG/L
THALLIUM	7440-28-0	4	1	NA	NA	2	*	UG/L
TIN	7440-31-5	4	3	6.7	9.93	13	*	UG/L
VANADIUM	7440-62-2	4	3	2.1	2.17	2.3	*	UG/L
ZINC	7440-66-6	4	2	67.2	90.1	113	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	4	2	18	18.5	19	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	4	280	2165	6700	.8	PCI/L
TECHNETIUM-99	14133-76-7	4	2	8.7	15.65	22.6	2	PCI/L
TOTAL URANIUM	7440-61-1	4	4	25	54.85	120	.02	UG/L
TRITIUM	10028-17-8	4	1	NA	NA	3500000	135	PCI/L
ALKALINITY	ALKALINITY	4	4	140	209	282	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	4	7.6	148.65	364	5	MG/L
CONDUCTIVITY	CONDUCT	4	4	1130	22207.5	49100	6	UMHO
FLUORIDE	7782-41-4	4	3	.85	11.72	18	.1	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	4	69.6	1892.4	3300	.1	MG/L
PH MEASUREMENT	PH	4	4	7.3	7.43	7.6	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	4	3.3	79.33	106	.05	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	1220	15547.5	33900	5	MG/L

TABLE A-8.2

LABORATORY DATA STATISTICAL REPORT
UO3 PLANT PROCESS CONDENSATE
Sample Location: TRANSFER LINE TANK TK-X37 TO TK-C5
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	4	2	48	84	120	10	UG/L
BROMOMETHANE	74-83-9	4	1	NA	NA	25	10	UG/L
CHLOROMETHANE	74-87-3	4	1	NA	NA	34	10	UG/L
2,4-DINITROPHENOL	51-28-5	4	1	NA	NA	69	25	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	18	10	UG/L
ALUMINUM	7429-90-5	4	1	NA	NA	72.9	*	UG/L
ARSENIC	7440-38-2	4	3	1	2	3	*	UG/L
BARIUM	7440-39-3	4	2	1.2	6.4	11.6	1.1	UG/L
BORON	7440-42-8	3	2	627	662.5	698	115	UG/L
CALCIUM	7440-70-2	4	1	NA	NA	213	91.8	UG/L
CHROMIUM	7440-47-3	4	4	17.2	75.5	179	*	UG/L
COBALT	7440-48-4	4	1	NA	NA	10	10	UG/L
IRON	7439-89-6	4	4	56.8	653.2	1570	*	UG/L
LEAD	7439-92-1	4	3	2.3	4.83	9	*	UG/L
MAGNESIUM	7439-95-4	4	3	22	65.7	118	*	UG/L
MANGANESE	7439-96-5	4	2	16.1	37.6	59.1	*	UG/L
MERCURY	7439-97-6	3	3	.1	8.23	14.2	3	UG/L
MOLYBDENUM	7439-98-7	3	2	8	8	8	8	UG/L
NICKEL	7440-02-0	4	3	21.3	50.03	86.7	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2	2	UG/L
SILICON	7440-21-3	3	2	1070	1095	1120	*	UG/L
SILVER	7440-22-4	4	1	NA	NA	10	6	UG/L
SODIUM	7440-23-5	4	2	281	392.5	504	*	UG/L
THALLIUM	7440-28-0	4	3	2	2.33	3	*	UG/L
TIN	7440-31-5	3	1	NA	NA	800	*	UG/L
ZINC	7440-66-6	4	2	7.9	8.3	8.7	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	4	4	9.9	35.98	83	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	4	14	37.75	85	.8	PCI/L
TECHNETIUM-99	14133-76-7	4	2	20	33.9	47.8	2	PCI/L
TOTAL URANIUM	7440-61-1	4	4	10	44.48	100	.02	UG/L
TRITIUM	10028-17-8	4	1	NA	NA	3500000	135	PCI/L
ALKALINITY	ALKALINITY	2	1	NA	NA	17400	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	4	15.5	162.38	385	5	MG/L
CONDUCTIVITY	CONDUCT	4	4	1710	80352.5	151000	6	UMHO
FLUORIDE	7782-41-4	4	2	15.8	17.6	19.4	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	3	2520	3596.67	4950	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	2	2	70.8	2090.4	4110	.1	MG/L
NITROGEN IN NITRITE	NO2-N	3	3	4.3	21.77	54.6	.1	MG/L
PH MEASUREMENT	PH	4	1	NA	NA	2.7	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	1	NA	NA	.023	.05	MG/L
SULFATE	14808-79-8	4	2	5	17.5	30	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	2	42	88	134	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
TK-C5 DISCHARGE LINE TO 216-U-17 CRIB	36	283
TRANSFER LINE TANK TK-X37 TO TK-C5	42	291

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

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TABLE A-9.1

LABORATORY DATA STATISTICAL REPORT
U03/U PLANT WASTEWATER
Sample Location: EOP MAIN SEWER BRANCH TO 207-U BASINS
Date from 01/01/92 to 04/24/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	31	10	UG/L
ALUMINUM	7429-90-5	1	1	NA	NA	49	*	UG/L
ANTIMONY	7440-36-0	4	4	17.9	28.78	60	35	UG/L
ARSENIC	7440-38-2	4	4	2	2.93	3.5	*	UG/L
BARIUM	7440-39-3	4	4	23.8	27.98	31.9	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.56	1.2	.3	UG/L
CADMIUM	7440-43-9	4	4	1.4	2.83	7	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	18700	91.8	UG/L
CHROMIUM	7440-47-3	4	3	3.3	5.2	9	*	UG/L
COBALT	7440-48-4	4	4	1.5	4.08	9	10	UG/L
COPPER	7440-50-8	4	3	2.7	5.67	8	*	UG/L
IRON	7439-89-6	1	1	NA	NA	15	*	UG/L
LEAD	7439-92-1	4	2	1.9	3.75	5.6	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	4090	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	4	*	UG/L
MERCURY	7439-97-6	4	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	8.03	20	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	1340	*	UG/L
SELENIUM	7782-49-2	4	4	2	2.88	3.7	2	UG/L
SILVER	7440-22-4	4	3	3.3	5.53	10	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	1910	*	UG/L
TIN	7440-31-5	4	3	6.7	9.7	13	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	3.63	8	*	UG/L
ZINC	7440-66-6	4	3	4.8	5.53	7	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	4	1	NA	NA	1.2	.2	PCI/L
TECHNETIUM-99	14133-76-7	4	1	NA	NA	6.6	2	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.465	.61	.73	.02	UG/L
ALKALINITY	ALKALINITY	4	4	50	52.75	55	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	3	5	8.9	15.7	5	MG/L
CONDUCTIVITY	CONDUCT	4	4	120	395	1200	6	UMHO
FLUORIDE	7782-41-4	4	3	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	1	NA	NA	.12	.1	MG/L
PH MEASUREMENT	PH	4	4	7.3	8.08	8.4	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	1	NA	NA	1.3	.05	MG/L
SULFATE	14808-79-8	4	4	8	8.48	9.9	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	82	100.75	137	5	MG/L

TABLE A-9.2

LABORATORY DATA STATISTICAL REPORT
UO3/U PLANT WASTEWATER
Sample Location: RAW WATER - UO3 (SAMPLER DISCRETION)
Date from 01/01/92 to 04/24/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALDRIN	309-00-2	4	1	NA	NA	.05	.02	UG/L
ALPHA-BHC	319-84-6	4	1	NA	NA	.05	.048	UG/L
BETA-BHC	319-85-7	4	1	NA	NA	.05	.048	UG/L
DELTA-BHC	319-86-8	4	1	NA	NA	.05	.048	UG/L
ALUMINUM	7429-90-5	1	1	NA	NA	49	*	UG/L
ANTIMONY	7440-36-0	4	4	17.9	28.78	60	35	UG/L
ARSENIC	7440-38-2	4	4	2	2.93	3.5	*	UG/L
BARIUM	7440-39-3	4	4	26	28.68	31.1	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.5	1	.3	UG/L
CADMIUM	7440-43-9	4	4	1.4	2.83	7	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	16300	91.8	UG/L
CHROMIUM	7440-47-3	4	3	3.3	5.2	9	*	UG/L
COBALT	7440-48-4	4	4	1.5	4.08	9	10	UG/L
COPPER	7440-50-8	4	4	8	13.28	17.8	*	UG/L
IRON	7439-89-6	1	1	NA	NA	32.9	*	UG/L
LEAD	7439-92-1	4	1	NA	NA	1.7	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	3620	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	4	*	UG/L
MERCURY	7439-97-6	4	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	8.03	20	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	1340	*	UG/L
SELENIUM	7782-49-2	4	4	2	2.88	3.7	2	UG/L
SILVER	7440-22-4	4	3	3.3	5.53	10	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	1580	*	UG/L
THALLIUM	7440-28-0	4	1	NA	NA	2	*	UG/L
TIN	7440-31-5	4	3	6.7	8.8	13	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	3.68	8	*	UG/L
ZINC	7440-66-6	4	4	4.8	8.33	17.4	*	UG/L
TECHNETIUM-99	14133-76-7	4	1	NA	NA	3.3	2	PCI/L
TOTAL URANIUM	7440-61-1	1	1	NA	NA	.52	.02	PCI/L
TOTAL URANIUM	7440-61-1	3	3	.309	.46	.56	.02	UG/L
ALKALINITY	ALKALINITY	4	4	52	55.5	58	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	1	NA	NA	7	5	MG/L
CONDUCTIVITY	CONDUCT	4	4	120	126.5	134	6	UMHO
FLUORIDE	7782-41-4	4	3	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	1	NA	NA	.24	.1	MG/L
PH MEASUREMENT	PH	4	4	8.3	8.45	8.7	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	1	NA	NA	.06	.05	MG/L
SULFATE	14808-79-8	4	4	8	8.38	9.5	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	66	87.5	101	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
EOP MAIN SEWER BRANCH TO 207-U BASINS	36	283
RAW WATER - UO3 (SAMPLER DISCRETION)	40	284

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

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TABLE A-10.1

LABORATORY DATA STATISTICAL REPORT
B PLANT CHEMICAL SEWER
Sample Location: BUILDING 211-B
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
PHENOL	108-95-2	8	1	NA	NA	8.3	5	UG/L
ANTIMONY	7440-36-0	4	4	1.6	6	18.6	35	UG/L
ARSENIC	7440-38-2	4	3	1.5	2.6	4.1	*	UG/L
BARIUM	7440-39-3	4	3	1	18.87	28	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.1	.3	.4	.3	UG/L
CADMIUM	7440-43-9	4	2	1.4	1.45	1.5	*	UG/L
CHROMIUM	7440-47-3	4	2	1.8	2.15	2.5	*	UG/L
COBALT	7440-48-4	4	3	1.5	1.87	2.1	10	UG/L
COPPER	7440-50-8	4	2	2.2	8.9	15.6	*	UG/L
LEAD	7439-92-1	4	3	1.2	8.7	22.6	*	UG/L
MERCURY	7439-97-6	4	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	4	3	3.7	5.23	6.5	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	2	3.4	3.75	4.1	6	UG/L
THALLIUM	7440-28-0	4	2	1.1	1.3	1.5	*	UG/L
TIN	7440-31-5	4	2	6.7	311.85	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.2	10.38	34.5	*	UG/L
ZINC	7440-66-6	4	3	4.1	9.13	16.2	*	UG/L
URANIUM-238	U-238	4	2	.23	.25	.26	.06	PCI/L
URANIUM-233/234	U-233/234	4	4	.2	.25	.32	.08	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.53	.58	.68	.02	UG/L
ALKALINITY	ALKALINITY	4	4	54	63.25	78	.5	MG/L
AMMONIA (AS N)	7664-41-7	4	1	NA	NA	.1	.05	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	4	21	54	70	2	MG/L
CHLORIDE	12595-89-0	4	4	1.1	1.35	1.6	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	125	142.75	162	6	UMHO
CYANIDE	57-12-5	3	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	3	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	4	4	8.1	8.2	8.3	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	1	NA	NA	.28	.05	MG/L
SULFATE	14808-79-8	4	4	8	10	11	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	73	101.5	151	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1	1.75	2.9	.5	MG/L
TOTAL SUSPENDED SOLIDS	TSS	4	2	6	87	168	5	MG/L

TABLE A-10.2

LABORATORY DATA STATISTICAL REPORT
B PLANT CHEMICAL SEWER
Sample Location: RAW WATER - B PLANT SUPPLY - BLDG 294-B
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	3	3	1.6	1.8	2	35	UG/L
ARSENIC	7440-38-2	3	1	NA	NA	1.5	*	UG/L
BARIUM	7440-39-3	3	3	27.8	30.5	34.1	1.1	UG/L
BERYLLIUM	7440-41-7	3	3	.1	.3	.4	.3	UG/L
CADMIUM	7440-43-9	3	1	NA	NA	1.1	*	UG/L
CHROMIUM	7440-47-3	3	2	1.8	2.15	2.5	*	UG/L
COBALT	7440-48-4	3	3	1.5	1.87	2.1	10	UG/L
COPPER	7440-50-8	3	2	5.1	7.4	9.7	*	UG/L
LEAD	7439-92-1	3	3	1.5	3.87	8.2	*	UG/L
MERCURY	7439-97-6	3	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	3	3	3.7	4.97	6.5	*	UG/L
SELENIUM	7782-49-2	3	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	3	2	3.4	3.75	4.1	6	UG/L
THALLIUM	7440-28-0	3	1	NA	NA	1.5	*	UG/L
TIN	7440-31-5	3	1	NA	NA	617	*	UG/L
VANADIUM	7440-62-2	3	3	2.2	2.33	2.5	*	UG/L
ZINC	7440-66-6	3	2	7.1	8.85	10.6	*	UG/L
POTASSIUM-40	13966-00-2	3	1	NA	NA	130	50	PCI/L
URANIUM-233/234	U-233/234	3	2	.22	.23	.24	.08	PCI/L
TOTAL URANIUM	7440-61-1	3	3	.52	.57	.63	.02	UG/L
ALKALINITY	ALKALINITY	3	3	56	62	68	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	3	3	24	40.67	58	2	MG/L
CHLORIDE	12595-89-0	3	3	.9	1	1.1	.2	MG/L
CONDUCTIVITY	CONDUCT	3	3	125	141.33	152	6	UMHO
CYANIDE	57-12-5	2	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	3	3	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	3	3	8.2	8.43	8.6	NA	PH
SULFATE	14808-79-8	3	3	10	10	10	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	3	3	76	85	101	5	MG/L
TOTAL ORGANIC CARBON	TOC	3	3	1.2	1.87	2.8	.5	MG/L

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TABLE A-10.3

LABORATORY DATA STATISTICAL REPORT
B PLANT CHEMICAL SEWER
Sample Location: SANITARY WATER - MANHOLE 4 - OVERFLOW
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	4	4	8	17	25	5	UG/L
PHENOL	108-95-2	8	1	NA	NA	6.2	.000002	UG/L
ANTIMONY	7440-36-0	4	4	1.6	6	18.6	35	UG/L
ARSENIC	7440-38-2	4	2	1.5	1.85	2.2	*	UG/L
BARIUM	7440-39-3	4	4	26.8	27.58	29	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.1	.3	.4	.3	UG/L
CADMIUM	7440-43-9	4	2	1.1	1.25	1.4	*	UG/L
CHROMIUM	7440-47-3	4	3	1.8	2.53	3.3	*	UG/L
COBALT	7440-48-4	4	4	1.5	2.13	2.9	10	UG/L
COPPER	7440-50-8	4	4	2.2	4.18	5.9	*	UG/L
LEAD	7439-92-1	4	2	1.1	1.25	1.4	*	UG/L
MERCURY	7439-97-6	4	3	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	4.78	6.5	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	3	3.3	3.6	4.1	6	UG/L
THALLIUM	7440-28-0	4	2	1.1	1.9	2.7	*	UG/L
TIN	7440-31-5	4	2	6.7	311.85	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	2.28	2.5	*	UG/L
ZINC	7440-66-6	4	4	4.1	5.18	7.1	*	UG/L
STRONTIUM 89	14158-27-1	4	1	NA	NA	.2	.04	PCI/L
URANIUM-233/234	U-233/234	4	1	NA	NA	.28	.08	PCI/L
TOTAL URANIUM	7440-61-1	4	3	.14	.26	.47	.02	UG/L
ALKALINITY	ALKALINITY	4	4	42	52.75	60	.5	MG/L
AMMONIA (AS N)	7664-41-7	4	1	NA	NA	.07	.05	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	3	16	43.67	74	2	MG/L
CHLORIDE	12595-89-0	4	4	3.2	3.73	4.3	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	131	149.25	157	6	UMHO
CYANIDE	57-12-5	3	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	3	.1	.17	.3	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	4	4	8	8.03	8.1	NA	PH
SULFATE	14808-79-8	4	4	14	17	20	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	75	98.25	135	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	.91	1.3	1.7	.5	MG/L

TABLE A-10.4

LABORATORY DATA STATISTICAL REPORT
B PLANT CHEMICAL SEWER
Sample Location: STEAM CONDENSATE - B PLANT 284-B POWERHO
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	1	1	NA	NA	33	10	UG/L
ANTIMONY	7440-36-0	3	3	2.9	10.7	18.6	35	UG/L
ARSENIC	7440-38-2	3	2	15	16.9	18.8	*	UG/L
BARIUM	7440-39-3	3	3	1.2	4.53	9.7	1.1	UG/L
BERYLLIUM	7440-41-7	3	3	.1	.27	.4	.3	UG/L
CADMIUM	7440-43-9	3	2	1.2	2	2.8	*	UG/L
CHROMIUM	7440-47-3	3	2	55.4	63.8	72.2	*	UG/L
COBALT	7440-48-4	3	3	12.6	17.57	25.7	10	UG/L
COPPER	7440-50-8	3	2	1290	337145	673000	*	UG/L
LEAD	7439-92-1	3	3	415	1796	4080	*	UG/L
MERCURY	7439-97-6	3	2	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	3	3	49.8	110.5	193	*	UG/L
SELENIUM	7782-49-2	3	1	NA	NA	2.9	2	UG/L
SILVER	7440-22-4	3	2	5.6	22	38.4	6	UG/L
THALLIUM	7440-28-0	3	2	1.5	2.1	2.7	*	UG/L
TIN	7440-31-5	3	2	13.9	315.45	617	*	UG/L
VANADIUM	7440-62-2	3	3	2.1	8.4	20.9	*	UG/L
ZINC	7440-66-6	3	2	619	10559.5	20500	*	UG/L

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TABLE A-10.5

LABORATORY DATA STATISTICAL REPORT
B PLANT CHEMICAL SEWER
Sample Location: TANK TK-900 IN THE 221-B BUILDING
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	4	1	NA	NA	10	10	UG/L
DI-N-BUTYL PHTHALATE	84-74-2	4	1	NA	NA	18	10	UG/L
CHLOROFORM	67-66-3	4	1	NA	NA	140	5	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	31	10	UG/L
PHENOL	108-95-2	8	1	NA	NA	16.8	5	Ug/L
ANTIMONY	7440-36-0	4	4	2.7	9.43	18.6	35	UG/L
ARSENIC	7440-38-2	4	4	1.5	2.25	3.5	*	UG/L
BARIUM	7440-39-3	4	4	23.3	35.83	46.2	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.1	.3	.4	.3	UG/L
CADMIUM	7440-43-9	4	3	1.1	11.13	25.1	*	UG/L
CHROMIUM	7440-47-3	4	3	2.5	15.97	31.1	*	UG/L
COBALT	7440-48-4	4	3	2	2.83	4.4	10	UG/L
COPPER	7440-50-8	4	3	121	343.67	618	*	UG/L
LEAD	7439-92-1	4	4	1.8	92.45	247	*	UG/L
MERCURY	7439-97-6	4	3	.11	2.04	3.1	3	UG/L
NICKEL	7440-02-0	4	4	6.5	27	50.9	*	UG/L
SELENIUM	7782-49-2	4	2	2.3	2.6	2.9	2	UG/L
SILVER	7440-22-4	4	3	3.3	3.6	4.1	6	UG/L
THALLIUM	7440-28-0	4	1	NA	NA	2.7	*	UG/L
TIN	7440-31-5	4	2	10.6	313.8	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	2.35	2.8	*	UG/L
ZINC	7440-66-6	4	3	196	436.67	847	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	4	290	1857.5	4700	.8	PCI/L
STRONTIUM 89	14158-27-1	4	1	NA	NA	8.6	.04	PCI/L
STRONTIUM-90	10098-97-2	4	4	79	774.75	1900	*	PCI/L
CESIUM-137	10045-97-3	3	3	58	382.67	890	*	PCI/L
TOTAL URANIUM	7440-61-1	4	3	.17	.22	.26	.02	UG/L
ALKALINITY	ALKALINITY	4	4	45	138.75	278	.5	MG/L
AMMONIA (AS N)	7664-41-7	4	3	.08	.21	.47	.05	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	4	11	44	83	2	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	3	36	52.67	82	5	MG/L
CHLORIDE	12595-89-0	4	4	1.2	6.78	20	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	120	336.25	551	6	UMHO
CYANIDE	57-12-5	3	2	10	11.2	12.4	10	UG/L
FLUORIDE	7782-41-4	4	1	NA	NA	20	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	3	.8	1.67	3	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	4	.95	1.83	3.25	.1	MG/L
NITROGEN IN NITRITE	NO2-N	4	2	.4	.4	.4	.1	MG/L
OIL & GREASE	OIL&GREASE	4	2	6	14.5	23	5	MG/L
PH MEASUREMENT	PH	4	4	7.8	8.48	10	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	4	.15	.78	1.7	.05	MG/L
SULFATE	14808-79-8	4	4	9	23	50	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	73	227.25	400	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	2.2	6.8	11.2	.5	MG/L
TOTAL SUSPENDED SOLIDS	TSS	4	2	43	44	45	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
BUILDING 211-B	35	292
RAW WATER - B PLANT SUPPLY - BLDG 294-B	31	289
SANITARY WATER - MANHOLE 4 - OVERFLOW	34	292
STEAM CONDENSATE - B PLANT 284-B POWERHO	18	75
TANK TK-900 IN THE 221-B BUILDING	45	292

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

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TABLE A-11.1

LABORATORY DATA STATISTICAL REPORT
B PLANT COOLING WATER
Sample Location: 207-BA COMBINED CBC AND BCE STREAMS
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	33	10	UG/L
PHENOL	108-95-2	8	1	NA	NA	14.1	5	UG/L
ANTIMONY	7440-36-0	4	4	1.8	6.1	18.6	35	UG/L
ARSENIC	7440-38-2	4	4	1.5	1.93	2.3	*	UG/L
BARIUM	7440-39-3	4	4	29.6	31.53	33.6	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.35	.4	.3	UG/L
CADMIUM	7440-43-9	4	4	1.1	1.43	1.7	*	UG/L
CHROMIUM	7440-47-3	4	4	1.8	2.53	3.3	*	UG/L
COBALT	7440-48-4	4	4	1.5	2.35	2.9	10	UG/L
COPPER	7440-50-8	4	4	5.2	29.43	95.6	*	UG/L
LEAD	7439-92-1	4	2	2.1	2.15	2.2	*	UG/L
MERCURY	7439-97-6	4	2	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	4.7	6.5	*	UG/L
SELENIUM	7782-49-2	4	2	2.3	2.8	3.3	2	UG/L
SILVER	7440-22-4	4	3	2.1	2.93	3.4	6	UG/L
THALLIUM	7440-28-0	4	3	1.1	1.27	1.5	*	UG/L
TIN	7440-31-5	4	2	6.7	311.85	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	2.25	2.4	*	UG/L
ZINC	7440-66-6	4	4	7.1	13.48	26.2	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	4	1	NA	NA	.3	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	1	NA	NA	1.3	.8	PCI/L
STRONTIUM 89	14158-27-1	4	1	NA	NA	.3	.04	PCI/L
URANIUM-238	U-238	4	3	.2	.26	.36	.06	PCI/L
URANIUM-233/234	U-233/234	4	4	.24	.3	.42	.08	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.05	.49	.85	.02	UG/L
TRITIUM	10028-17-8	1	1	NA	NA	330	135	PCI/L
ALKALINITY	ALKALINITY	4	4	56	63.25	68	.5	MG/L
AMMONIA (AS N)	7664-41-7	4	1	NA	NA	.11	.05	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	3	19	39.33	61	2	MG/L
CHLORIDE	12595-89-0	4	4	1	1.15	1.5	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	125	146.5	160	6	UMHO
CYANIDE	57-12-5	3	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	3	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	1	NA	NA	.2	.2	MG/L
NITROGEN IN NITRITE	NO2-N	4	1	NA	NA	.3	.1	MG/L
PH MEASUREMENT	PH	4	4	8.1	8.23	8.4	NA	PH
SULFATE	14808-79-8	4	4	9	10	11	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	72	87.25	95	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1.1	1.58	2.3	.5	MG/L
TOTAL SUSPENDED SOLIDS	TSS	4	1	NA	NA	7	5	MG/L

TABLE A-11.2

LABORATORY DATA STATISTICAL REPORT
B PLANT COOLING WATER
Sample Location: 221-BA 15 IN DIA EFFLUENT
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	11	10	UG/L
ANTIMONY	7440-36-0	4	3	1.8	7.47	18.6	35	UG/L
ARSENIC	7440-38-2	4	4	1.5	1.98	2.5	*	UG/L
BARIUM	7440-39-3	4	4	28.9	30.75	32.3	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.35	.4	.3	UG/L
CADMIUM	7440-43-9	4	4	1.1	1.43	1.7	*	UG/L
CHROMIUM	7440-47-3	4	4	2.3	2.65	3.3	*	UG/L
COBALT	7440-48-4	4	4	1.5	2.35	2.9	10	UG/L
COPPER	7440-50-8	4	4	1.6	3.63	4.9	*	UG/L
LEAD	7439-92-1	4	3	1.6	1.73	1.9	*	UG/L
MERCURY	7439-97-6	4	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	4	4	4.2	4.85	6.5	*	UG/L
SELENIUM	7782-49-2	4	2	2.3	2.8	3.3	2	UG/L
SILVER	7440-22-4	4	3	2.1	2.93	3.4	6	UG/L
THALLIUM	7440-28-0	4	3	1.1	1.77	2.7	*	UG/L
TIN	7440-31-5	4	2	6.7	311.85	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	2.25	2.4	*	UG/L
ZINC	7440-66-6	4	4	4.6	6.58	8	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	1	NA	NA	2.7	.8	PCI/L
URANIUM-238	U-238	4	4	.2	.22	.25	.06	PCI/L
URANIUM-233/234	U-233/234	4	2	.23	.26	.29	.08	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.02	.44	.68	.02	UG/L
TRITIUM	10028-17-8	1	1	NA	NA	300	135	PCI/L
ALKALINITY	ALKALINITY	4	4	54	63	68	.5	MG/L
AMMONIA (AS N)	7664-41-7	4	1	NA	NA	.07	.05	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	3	17	50	90	2	MG/L
CHLORIDE	12595-89-0	4	4	.9	1.08	1.4	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	123	143	152	6	UMHO
CYANIDE	57-12-5	3	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	3	.1	.17	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	1	NA	NA	.2	.2	MG/L
NITROGEN IN NITRITE	NO2-N	4	1	NA	NA	.4	.1	MG/L
PH MEASUREMENT	PH	4	4	8	8.2	8.4	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	1	NA	NA	.05	.05	MG/L
SULFATE	14808-79-8	4	4	9	11.25	14	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	70	89.75	113	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1	1.75	2.6	.5	MG/L

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TABLE A-11.3

LABORATORY DATA STATISTICAL REPORT
B PLANT COOLING WATER
Sample Location: 221-BG 24 IN DIA EFFLUENT
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	4	1	NA	NA	14	10	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	29	10	UG/L
PHENOL	108-95-2	8	1	NA	NA	7.3	5	UG/L
ANTIMONY	7440-36-0	4	4	1.6	6	18.6	35	UG/L
ARSENIC	7440-38-2	4	4	1.5	1.98	2.5	*	UG/L
BARIUM	7440-39-3	4	4	28.2	30.88	32	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.35	.4	.3	UG/L
CADMIUM	7440-43-9	4	4	1.1	1.45	1.7	*	UG/L
CHROMIUM	7440-47-3	4	4	2.5	2.75	3.3	*	UG/L
COBALT	7440-48-4	4	4	2.1	2.53	2.9	10	UG/L
COPPER	7440-50-8	4	4	1.6	3.48	4.5	*	UG/L
LEAD	7439-92-1	4	1	NA	NA	1.4	*	UG/L
MERCURY	7439-97-6	4	2	.1	.13	.15	3	UG/L
NICKEL	7440-02-0	4	4	3.7	4.7	6.5	*	UG/L
SELENIUM	7782-49-2	4	2	2.3	2.8	3.3	2	UG/L
SILVER	7440-22-4	4	3	2.1	2.93	3.4	6	UG/L
THALLIUM	7440-28-0	4	3	1.1	1.77	2.7	*	UG/L
TIN	7440-31-5	4	2	7.2	312.1	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	2.48	3.1	*	UG/L
ZINC	7440-66-6	4	4	7.1	9.78	14.2	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	1	NA	NA	2.3	.8	PCI/L
STRONTIUM 89	14158-27-1	4	1	NA	NA	.27	.04	PCI/L
THORIUM-228	14274-82-9	4	1	NA	NA	19	8	PCI/L
URANIUM-238	U-238	4	4	.18	.23	.31	.06	PCI/L
URANIUM-233/234	U-233/234	4	4	.2	.27	.4	.08	PCI/L
TOTAL URANIUM	7440-61-1	4	4	.49	.62	.68	.02	UG/L
ALKALINITY	ALKALINITY	4	4	57	63.75	68	.5	MG/L
AMMONIA (AS N)	7664-41-7	4	1	NA	NA	.05	.05	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	3	19	43.33	68	2	MG/L
CHLORIDE	12595-89-0	4	4	.9	1.1	1.4	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	122	142.25	153	6	UMHO
CYANIDE	57-12-5	3	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	4	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	1	NA	NA	.2	.2	MG/L
NITROGEN IN NITRITE	NO2-N	4	1	NA	NA	.2	.1	MG/L
PH MEASUREMENT	PH	4	4	8.1	8.23	8.4	NA	PH
SULFATE	14808-79-8	4	4	10	11	12	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	76	87.75	107	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1	1.65	2.3	.5	MG/L

TABLE A-11.4

LABORATORY DATA STATISTICAL REPORT
B PLANT COOLING WATER
Sample Location: RAW WATER - 294-B SUPPLY TO B PLANT
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	1	1	NA	NA	18.6	35	UG/L
ARSENIC	7440-38-2	1	1	NA	NA	2.5	*	UG/L
BARIUM	7440-39-3	1	1	NA	NA	30.6	1.1	UG/L
BERYLLIUM	7440-41-7	1	1	NA	NA	.3	.3	UG/L
CADMIUM	7440-43-9	1	1	NA	NA	1.4	*	UG/L
CHROMIUM	7440-47-3	1	1	NA	NA	3.3	*	UG/L
COBALT	7440-48-4	1	1	NA	NA	2.9	10	UG/L
COPPER	7440-50-8	1	1	NA	NA	6	*	UG/L
NICKEL	7440-02-0	1	1	NA	NA	4.2	*	UG/L
SELENIUM	7782-49-2	1	1	NA	NA	3.3	2	UG/L
SILVER	7440-22-4	1	1	NA	NA	3.3	6	UG/L
THALLIUM	7440-28-0	1	1	NA	NA	2.7	*	UG/L
TIN	7440-31-5	1	1	NA	NA	6.7	*	UG/L
VANADIUM	7440-62-2	1	1	NA	NA	2.1	*	UG/L
ZINC	7440-66-6	1	1	NA	NA	11.4	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	1	1	NA	NA	2	.8	PCI/L
URANIUM-238	U-238	1	1	NA	NA	.2	.06	PCI/L
URANIUM-233/234	U-233/234	1	1	NA	NA	.24	.08	PCI/L
TOTAL URANIUM	7440-61-1	1	1	NA	NA	.77	.02	UG/L
ALKALINITY	ALKALINITY	1	1	NA	NA	69	.5	MG/L
AMMONIA (AS N)	7664-41-7	1	1	NA	NA	.07	.05	MG/L
CHLORIDE	12595-89-0	1	1	NA	NA	1.4	.2	MG/L
CONDUCTIVITY	CONDUCT	1	1	NA	NA	151	6	UMHO
CYANIDE	57-12-5	1	1	NA	NA	10	10	UG/L
FLUORIDE	7782-41-4	1	1	NA	NA	.2	.1	MG/L
NITROGEN IN NITRITE	NO2-N	1	1	NA	NA	.2	.1	MG/L
PH MEASUREMENT	PH	1	1	NA	NA	8.2	NA	PH
SULFATE	14808-79-8	1	1	NA	NA	9	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	1	1	NA	NA	120	5	MG/L
TOTAL ORGANIC CARBON	TOC	1	1	NA	NA	1.2	.5	MG/L

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TABLE A-11.5

LABORATORY DATA STATISTICAL REPORT
B PLANT COOLING WATER
Sample Location: STAIRWELL #1 STEAM CONDENSATE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	3	3	2.2	7.83	18.6	35	UG/L
ARSENIC	7440-38-2	3	2	1.7	1.95	2.2	*	UG/L
BARIUM	7440-39-3	3	3	10.6	30.57	63.2	1.1	UG/L
BERYLLIUM	7440-41-7	3	3	.3	.33	.4	.3	UG/L
CADMIUM	7440-43-9	3	3	1.4	1.53	1.7	*	UG/L
CHROMIUM	7440-47-3	3	3	1.8	2.53	3.3	*	UG/L
COBALT	7440-48-4	3	3	1.5	2.43	2.9	10	UG/L
COPPER	7440-50-8	3	3	303	423.67	542	*	UG/L
LEAD	7439-92-1	3	2	150	176.5	203	*	UG/L
NICKEL	7440-02-0	3	3	4.4	5.13	6.4	*	UG/L
SELENIUM	7782-49-2	3	2	2.3	2.8	3.3	2	UG/L
SILVER	7440-22-4	3	3	2.1	2.93	3.4	6	UG/L
THALLIUM	7440-28-0	3	2	1.2	1.6	2	*	UG/L
TIN	7440-31-5	3	2	6.9	311.95	617	*	UG/L
VANADIUM	7440-62-2	3	3	2.1	2.27	2.4	*	UG/L
ZINC	7440-66-6	3	3	35.9	44.3	58.1	*	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
207-BA COMBINED CBC AND BCE STREAMS	40	293
221-BA 15 IN DIA EFFLUENT	37	293
221-BG 24 IN DIA EFFLUENT	39	293
RAW WATER - 294-B SUPPLY TO B PLANT	30	282
STAIRWELL #1 STEAM CONDENSATE	16	17

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.

NA - Not applicable.

Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.

* - DL not specified

CASN - Chemical Abstract Service Number

TABLE A-12.1

LABORATORY DATA STATISTICAL REPORT
242-A EVAPORATOR COOLING WATER
Sample Location: EOP 1/2 IN SAM PORT DWNSTRM INTAKE RC2-1
Date from 01/01/92 to 04/19/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	4	3	14.7	21.13	30	35	UG/L
ARSENIC	7440-38-2	4	2	1.5	1.6	1.7	*	UG/L
BARIUM	7440-39-3	4	4	19.4	25.1	28.7	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.4	2	5	.3	UG/L
CADMIUM	7440-43-9	4	3	1.1	3.1	5	*	UG/L
CHROMIUM	7440-47-3	4	3	2.5	5.67	10	*	UG/L
COBALT	7440-48-4	4	3	2.1	3.87	5	10	UG/L
COPPER	7440-50-8	4	4	21.2	45.93	77.6	*	UG/L
LEAD	7439-92-1	4	2	3.3	6.15	9	*	UG/L
MERCURY	7439-97-6	4	3	.12	.19	.25	3	UG/L
NICKEL	7440-02-0	4	3	6.5	7.73	10	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	1.6	2	UG/L
SILVER	7440-22-4	4	2	2.2	3.1	4	6	UG/L
THALLIUM	7440-28-0	2	1	NA	NA	1.5	*	UG/L
TIN	7440-31-5	4	2	800	800	800	*	UG/L
VANADIUM	7440-62-2	4	3	2.2	5.33	10	*	UG/L
ZINC	7440-66-6	4	4	7.7	16.55	32.6	*	UG/L
ALKALINITY	ALKALINITY	4	4	60	61.75	64	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	4	6.6	30.4	68	2	MG/L
CHLORIDE	12595-89-0	4	4	.9	.95	1.1	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	140	143.5	150	6	UMHO
FLUORIDE	7782-41-4	4	3	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	2	.2	.2	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	1	NA	NA	.14	.1	MG/L
PH MEASUREMENT	PH	4	4	8.1	8.33	8.6	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	4	4	38	70	91	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1.1	1.38	1.6	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	3	9.7	11.97	14.5	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	1	NA	NA	6	5	MG/L

TABLE A-12.2

LABORATORY DATA STATISTICAL REPORT
242-A EVAPORATOR COOLING WATER
Sample Location: EOP DISCH PT, COOL WATER FUNNEL FLR DRN
Date from 01/01/92 to 04/19/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
2-BUTANONE	78-93-3	4	1	NA	NA	13	10	UG/L
ANTIMONY	7440-36-0	4	3	14.7	21.13	30	35	UG/L
ARSENIC	7440-38-2	4	2	1.5	1.6	1.7	*	UG/L
BARIUM	7440-39-3	4	4	19.2	24.48	28.4	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.4	2	5	.3	UG/L
CADMIUM	7440-43-9	4	3	1.1	3.1	5	*	UG/L
CHROMIUM	7440-47-3	4	4	2.5	4.88	10	*	UG/L
COBALT	7440-48-4	4	3	2.1	3.87	5	10	UG/L
COPPER	7440-50-8	4	4	3.6	9.68	13.4	*	UG/L
LEAD	7439-92-1	4	2	3.6	7.45	11.3	*	UG/L
MERCURY	7439-97-6	4	2	.22	.25	.28	3	UG/L
NICKEL	7440-02-0	4	4	6.5	20.98	54.8	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	1.6	2	UG/L
SILVER	7440-22-4	4	1	NA	NA	2.2	6	UG/L
THALLIUM	7440-28-0	2	1	NA	NA	1.5	*	UG/L
TIN	7440-31-5	4	2	800	800	800	*	UG/L
VANADIUM	7440-62-2	4	3	2.2	4.97	10	*	UG/L
ZINC	7440-66-6	4	4	14.7	26.98	53.8	*	UG/L
ALKALINITY	ALKALINITY	4	4	59	61	63	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	4	4	9.1	33.53	71	2	MG/L
CHLORIDE	12595-89-0	4	4	.8	.98	1.1	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	138	142.5	148	6	UMHO
FLUORIDE	7782-41-4	4	3	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	4	2	.2	.2	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	1	NA	NA	.13	.1	MG/L
PH MEASUREMENT	PH	4	4	7.6	8.15	8.5	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	4	4	51	71.75	85	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1.1	1.58	2.1	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	2	12.4	27.8	43.2	5	UG/L

TABLE A-12.3

LABORATORY DATA STATISTICAL REPORT
242-A EVAPORATOR COOLING WATER
Sample Location: RAW WATER - SAMPLER DISCRETION
Date from 01/01/92 to 04/19/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
2-BUTANONE	78-93-3	7	1	NA	NA	25	10	UG/L
ALUMINUM	7429-90-5	1	1	NA	NA	64	*	UG/L
ANTIMONY	7440-36-0	7	5	12.9	18.84	30	35	UG/L
ARSENIC	7440-38-2	7	5	1.5	2.02	2.8	*	UG/L
BARIUM	7440-39-3	7	7	19.3	25.83	30.2	1.1	UG/L
BERYLLIUM	7440-41-7	7	5	.2	1.32	5	.3	UG/L
CADMIUM	7440-43-9	7	6	1.1	2.68	5	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	19900	91.8	UG/L
CHROMIUM	7440-47-3	7	6	1.8	4.65	10	*	UG/L
COBALT	7440-48-4	7	6	1.5	3.95	8	10	UG/L
COPPER	7440-50-8	7	7	2.5	15.79	32.9	*	UG/L
IRON	7439-89-6	1	1	NA	NA	494	*	UG/L
LEAD	7439-92-1	7	5	2.1	3.58	6.7	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	4880	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	10.6	*	UG/L
MERCURY	7439-97-6	7	5	.1	.13	.2	3	UG/L
NICKEL	7440-02-0	7	6	3.4	6.33	10	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	926	*	UG/L
SELENIUM	7782-49-2	7	2	1.6	1.8	2	2	UG/L
SILVER	7440-22-4	7	3	2.2	2.73	3.4	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	1940	*	UG/L
THALLIUM	7440-28-0	4	2	1.5	1.9	2.3	*	UG/L
TIN	7440-31-5	7	4	617	708.5	800	*	UG/L
VANADIUM	7440-62-2	7	6	2.2	4.95	10	*	UG/L
ZINC	7440-66-6	7	7	7	11.8	31.1	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	7	1	NA	NA	8.7	.8	PCI/L
STRONTIUM 89	14158-27-1	7	1	NA	NA	6.8	.04	PCI/L
RADIUM-226	13982-63-3	6	1	NA	NA	20	.3	PCI/L
AMERICIUM-241	14596-10-2	7	1	NA	NA	8	*	PCI/L
ALKALINITY	ALKALINITY	7	7	55	60.43	64	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	6	6	3	43.17	140	2	MG/L
BROMIDE	7726-95-6	7	1	NA	NA	1.7	.38	MG/L
CHLORIDE	12595-89-0	7	7	.8	1.06	1.7	.2	MG/L
CONDUCTIVITY	CONDUCT	7	6	126	138.17	150	6	UMHO
CYANIDE	57-12-5	3	3	10	13.33	20	10	UG/L
FLUORIDE	7782-41-4	7	5	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	6	4	.2	.2	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	7	2	.13	.15	.16	.1	MG/L
PH MEASUREMENT	PH	7	6	7.9	8.32	8.5	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	7	1	NA	NA	.031	.05	MG/L
TOTAL DISSOLVED SOLIDS	TDS	7	7	47	72.57	92	5	MG/L
TOTAL ORGANIC CARBON	TOC	7	7	1.2	1.39	1.7	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	7	5	7.5	15.08	22.6	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	7	1	NA	NA	6	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
EOP 1/2 IN SAM PORT DWNSTRM INTAKE RC2-1	29	286
EOP DISCH PT, COOL WATER FUNNEL FLR DRN	29	286
RAW WATER - SAMPLER DISCRETION	44	324

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

TABLE A-13.1

LABORATORY DATA STATISTICAL REPORT
242-A EVAPORATOR STEAM CONDENSATE
Sample Location: SAM PORT ON RC-1 RAD MONITOR SAMPL LINE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	2	2	14.7	14.7	14.7	35	UG/L
ARSENIC	7440-38-2	2	2	1.5	1.5	1.5	*	UG/L
BARIUM	7440-39-3	2	2	10.2	10.45	10.7	1.1	UG/L
BERYLLIUM	7440-41-7	2	2	.4	.4	.4	.3	UG/L
CADMIUM	7440-43-9	2	2	1.1	1.1	1.1	*	UG/L
CHROMIUM	7440-47-3	2	2	2.5	2.5	2.5	*	UG/L
COBALT	7440-48-4	2	2	2.1	2.1	2.1	10	UG/L
COPPER	7440-50-8	2	2	3.6	3.6	3.6	*	UG/L
MERCURY	7439-97-6	2	2	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	2	2	6.5	6.5	6.5	*	UG/L
SELENIUM	7782-49-2	2	1	NA	NA	2	2	UG/L
SILVER	7440-22-4	2	1	NA	NA	3.6	6	UG/L
THALLIUM	7440-28-0	2	2	.9	1.25	1.6	*	UG/L
TIN	7440-31-5	2	2	617	617	617	*	UG/L
VANADIUM	7440-62-2	2	2	2.2	2.2	2.2	*	UG/L
ZINC	7440-66-6	2	1	NA	NA	7.5	*	UG/L
THORIUM-228	14274-82-9	2	1	NA	NA	36	8	PCI/L
ALKALINITY	ALKALINITY	2	2	22	22.5	23	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	2	2	12	20.5	29	2	MG/L
CHLORIDE	12595-89-0	2	2	.4	.45	.5	.2	MG/L
CONDUCTIVITY	CONDUCT	2	2	51	54.5	58	6	UMHO
PH MEASUREMENT	PH	2	2	6.9	7.05	7.2	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	2	2	16	22.5	29	5	MG/L
TOTAL ORGANIC HALIDES	TOX	2	1	NA	NA	40.3	5	UG/L

TABLE A-13.2

LABORATORY DATA STATISTICAL REPORT
242-A EVAPORATOR STEAM CONDENSATE
Sample Location: RAW WATER - SAMPLER DISCRETION
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	1	1	NA	NA	12.2	35	UG/L
ARSENIC	7440-38-2	1	1	NA	NA	2.2	*	UG/L
BARIUM	7440-39-3	1	1	NA	NA	30.6	1.1	UG/L
BERYLLIUM	7440-41-7	1	1	NA	NA	.3	.3	UG/L
CADMIUM	7440-43-9	1	1	NA	NA	1.7	*	UG/L
CHROMIUM	7440-47-3	1	1	NA	NA	2.5	*	UG/L
COBALT	7440-48-4	1	1	NA	NA	2.9	10	UG/L
NICKEL	7440-02-0	1	1	NA	NA	4.4	*	UG/L
VANADIUM	7440-62-2	1	1	NA	NA	2.4	*	UG/L
ALKALINITY	ALKALINITY	1	1	NA	NA	68	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	1	1	NA	NA	65	2	MG/L
CHLORIDE	12595-89-0	1	1	NA	NA	1	.2	MG/L
CONDUCTIVITY	CONDUCT	1	1	NA	NA	153	6	UMHO
FLUORIDE	7782-41-4	1	1	NA	NA	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	1	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	1	1	NA	NA	8.2	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	1	1	NA	NA	104	5	MG/L
TOTAL ORGANIC CARBON	TOC	1	1	NA	NA	1	.5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
RAW WATER - SAMPLER DISCRETION	18	284
SAM PORT ON RC-1 RAD MONITOR SAMPL LINE	24	285

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none). These data are used for statistical summary.

NA - Not applicable.

Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.

* - DL not specified

CASN - Chemical Abstract Service Number

TABLE A-14.1

LABORATORY DATA STATISTICAL REPORT
241-A TANK FARM COOLING WATER
Sample Location: WARM WATER SUMP
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALUMINUM	7429-90-5	1	1	NA	NA	64	*	UG/L
ANTIMONY	7440-36-0	4	3	12.2	29.03	57	35	UG/L
ARSENIC	7440-38-2	4	3	2	2.1	2.2	*	UG/L
BARIUM	7440-39-3	4	4	29.4	34.65	49.9	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.3	.57	1	.3	UG/L
CADMIUM	7440-43-9	4	3	1.5	2.4	4	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	21700	91.8	UG/L
CHROMIUM	7440-47-3	4	3	2.1	4.2	7	*	UG/L
COBALT	7440-48-4	4	4	1.5	3.75	8	10	UG/L
COPPER	7440-50-8	4	3	2.2	4.57	9	*	UG/L
IRON	7439-89-6	1	1	NA	NA	28.6	*	UG/L
LEAD	7439-92-1	4	2	1.1	1.8	2.5	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	3.6	*	UG/L
MERCURY	7439-97-6	4	2	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.4	7.63	19	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	877	*	UG/L
SELENIUM	7782-49-2	4	3	2	2.23	2.4	2	UG/L
SILVER	7440-22-4	4	3	2.1	4.17	7	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	2140	*	UG/L
THALLIUM	7440-28-0	3	2	1.1	1.7	2.3	*	UG/L
TIN	7440-31-5	3	1	NA	NA	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.3	5.35	10	*	UG/L
ZINC	7440-66-6	4	3	5.8	7.1	8	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	4	1	NA	NA	1.2	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	2	.64	1.57	2.5	.8	PCI/L
RADIUM-226	13982-63-3	3	1	NA	NA	35	.3	PCI/L
AMERICIUM-241	14596-10-2	4	1	NA	NA	.03	*	PCI/L
ALKALINITY	ALKALINITY	4	4	54	61.25	66	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	3	3	26	78	150	2	MG/L
CHLORIDE	12595-89-0	4	4	.8	.93	1.1	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	121	135	152	6	UMHO
CYANIDE	57-12-5	3	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	3	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	2	.2	.2	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	1	NA	NA	.24	.1	MG/L
PH MEASUREMENT	PH	4	4	8	8.13	8.3	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	1	NA	NA	.046	.05	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	59	85	107	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	.89	1.2	1.6	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	1	NA	NA	29	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	1	NA	NA	10	5	MG/L

TABLE A-14.2

LABORATORY DATA STATISTICAL REPORT
241-A TANK FARM COOLING WATER
Sample Location: WARM WATER SUMP DURING ECWS OPERATION
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	3	1	NA	NA	12	10	UG/L
ANTIMONY	7440-36-0	3	2	14.7	16.65	18.6	35	UG/L
ARSENIC	7440-38-2	3	3	1.5	1.93	2.8	*	UG/L
BARIUM	7440-39-3	3	3	25.5	33.5	42.2	1.1	UG/L
BERYLLIUM	7440-41-7	3	3	.3	.63	1.2	.3	UG/L
CADMIUM	7440-43-9	3	3	1.1	1.33	1.5	*	UG/L
CHROMIUM	7440-47-3	3	2	3.8	4.45	5.1	*	UG/L
COBALT	7440-48-4	3	3	2.1	2.5	2.9	10	UG/L
COPPER	7440-50-8	3	2	6.4	7.75	9.1	*	UG/L
LEAD	7439-92-1	3	2	2.1	2.45	2.8	*	UG/L
MERCURY	7439-97-6	3	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	3	2	4.2	5.35	6.5	*	UG/L
SELENIUM	7782-49-2	3	1	NA	NA	3.5	2	UG/L
SILVER	7440-22-4	3	3	3.3	3.97	5	6	UG/L
THALLIUM	7440-28-0	3	1	NA	NA	1.2	*	UG/L
TIN	7440-31-5	3	2	6.7	9.65	12.6	*	UG/L
VANADIUM	7440-62-2	3	2	2.6	2.85	3.1	*	UG/L
ZINC	7440-66-6	3	2	7.1	25.9	44.7	*	UG/L
RADIUM-226	13982-63-3	3	1	NA	NA	26	.3	PCI/L
ALKALINITY	ALKALINITY	3	3	55	60.33	68	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	3	2	9.6	20.3	31	2	MG/L
CHLORIDE	12595-89-0	3	3	1	1.2	1.6	.2	MG/L
CONDUCTIVITY	CONDUCT	2	2	126	141	157	6	UMHO
CYANIDE	57-12-5	2	1	NA	NA	10	10	UG/L
FLUORIDE	7782-41-4	2	2	.1	.1	.1	.1	MG/L
FLUORIDE	7782-41-4	1	1	NA	NA	200	.1	MG/L
PH MEASUREMENT	PH	3	2	8	8.1	8.2	NA	PH
TOTAL DISSOLVED SOLIDS	TDS	2	2	33	52	71	5	MG/L
TOTAL ORGANIC CARBON	TOC	3	3	1.3	2.43	4.2	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	3	1	NA	NA	22.5	5	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
WARM WATER SUMP	41	327
WARM WATER SUMP DURING ECWS OPERATION	32	309

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.

NA - Not applicable.

Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

DL - Minimum value reported with a U qualifier for entire database.

* - DL not specified

CASN - Chemical Abstract Service Number

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TABLE A-15.1

LABORATORY DATA STATISTICAL REPORT
244-AR VAULT COOLING WATER
Sample Location: MANHOLE 1 NEXT TO 2904-AR BLDG N CANYON
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALUMINUM	7429-90-5	1	1	NA	NA	64	*	UG/L
ANTIMONY	7440-36-0	4	3	12.2	29.03	57	35	UG/L
ARSENIC	7440-38-2	4	3	2	2.27	2.7	*	UG/L
BARIUM	7440-39-3	4	3	24.6	26.43	28.5	1.1	UG/L
BERYLLIUM	7440-41-7	4	3	.3	.57	1	.3	UG/L
CADMIUM	7440-43-9	4	3	1.5	2.4	4	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	22100	91.8	UG/L
CHROMIUM	7440-47-3	4	4	1.8	3.35	7	*	UG/L
COBALT	7440-48-4	4	4	1.8	3.83	8	10	UG/L
COPPER	7440-50-8	4	3	5.9	13.03	19.2	*	UG/L
IRON	7439-89-6	1	1	NA	NA	126	*	UG/L
LEAD	7439-92-1	4	1	NA	NA	2.5	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	7.1	*	UG/L
MERCURY	7439-97-6	4	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.4	7.63	19	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	877	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2	2	UG/L
SILVER	7440-22-4	4	2	3.4	5.2	7	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	2720	*	UG/L
THALLIUM	7440-28-0	3	1	NA	NA	2.3	*	UG/L
TIN	7440-31-5	3	1	NA	NA	617	*	UG/L
VANADIUM	7440-62-2	4	4	2.3	4.3	7	*	UG/L
ZINC	7440-66-6	4	2	10.4	32.7	55	*	UG/L
RADIUM-226	13982-63-3	3	1	NA	NA	39	.3	PCI/L
ALKALINITY	ALKALINITY	4	4	56	61.75	73	.5	MG/L
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD	3	3	25	52	81	2	MG/L
CHLORIDE	12595-89-0	4	4	.8	1.2	1.9	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	128	143	162	6	UMHO
CYANIDE	57-12-5	3	3	10	13.33	20	10	UG/L
FLUORIDE	7782-41-4	4	3	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	3	2	.2	.25	.3	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	1	NA	NA	.23	.1	MG/L
PH MEASUREMENT	PH	4	4	8	8.45	9	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	2	.033	.04	.05	.05	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	61	84	109	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	3	1.2	1.33	1.5	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	2	27.5	29.15	30.8	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	1	NA	NA	7	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
MANHOLE 1 NEXT TO 2904-AR BLDG N CANYON	38	327

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

TABLE A-16.1

LABORATORY DATA STATISTICAL REPORT
284-E POWERPLANT WASTEWATER
Sample Location: 282-E RESERVOIR
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ANTIMONY	7440-36-0	8	6	12.9	15.47	17.9	35	UG/L
ARSENIC	7440-38-2	8	5	1.5	1.54	1.7	*	UG/L
BARIUM	7440-39-3	8	7	9.8	25.79	32.6	1.1	UG/L
BERYLLIUM	7440-41-7	8	7	.2	.37	.4	.3	UG/L
CADMIUM	7440-43-9	8	4	1.1	1.2	1.5	*	UG/L
CHROMIUM	7440-47-3	8	6	1.8	2.2	2.5	*	UG/L
COBALT	7440-48-4	8	6	1.5	1.98	2.6	10	UG/L
COPPER	7440-50-8	8	2	3.8	4.05	4.3	*	UG/L
LEAD	7439-92-1	8	4	1.7	2	2.5	*	UG/L
MERCURY	7439-97-6	8	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	8	6	3.4	5.05	6.5	*	UG/L
SELENIUM	7782-49-2	8	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	8	1	NA	NA	3.4	6	UG/L
THALLIUM	7440-28-0	8	2	3	3.4	3.8	*	UG/L
TIN	7440-31-5	8	4	12.6	314.8	617	*	UG/L
VANADIUM	7440-62-2	8	8	2.2	3.05	5.5	*	UG/L
ZINC	7440-66-6	8	4	4.1	6.35	7.1	*	UG/L
ALKALINITY	ALKALINITY	8	8	58	61	67	.5	MG/L
AMMONIA (AS N)	7664-41-7	8	1	NA	NA	.12	.05	MG/L
CHLORIDE	12595-89-0	8	8	.8	.91	1	.2	MG/L
CONDUCTIVITY	CONDUCT	8	8	130	140.5	156	6	UMHO
CYANIDE	57-12-5	4	1	NA	NA	10	10	UG/L
FLUORIDE	7782-41-4	8	8	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	8	1	NA	NA	.2	.2	MG/L
PH MEASUREMENT	PH	8	8	7.9	8.15	8.4	NA	PH
SULFATE	14808-79-8	8	8	8	9	11	.25	MG/L
TOTAL ORGANIC CARBON	TOC	8	8	1.1	1.66	2.2	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	7	6.1	36.84	69.8	5	UG/L

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TABLE A-16.2

LABORATORY DATA STATISTICAL REPORT
284-E POWERPLANT WASTEWATER
Sample Location: DRAWLINE SAM TAP 2ND FLOOR 284E PWRHSE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BENZOIC ACID	65-85-0	7	5	130	318	560	50	UG/L
ANTIMONY	7440-36-0	7	4	12.9	15.85	17.9	35	UG/L
ARSENIC	7440-38-2	7	2	1.7	2.3	2.9	*	UG/L
BARIUM	7440-39-3	7	4	1.2	1.7	2.1	1.1	UG/L
BERYLLIUM	7440-41-7	7	6	.2	.37	.4	.3	UG/L
CADMIUM	7440-43-9	7	5	1.1	1.26	1.5	*	UG/L
CHROMIUM	7440-47-3	7	6	1.8	2.2	2.5	*	UG/L
COBALT	7440-48-4	7	5	2.1	2.46	3.4	10	UG/L
COPPER	7440-50-8	7	7	9.9	114.01	289	*	UG/L
LEAD	7439-92-1	7	3	1.8	2.2	2.5	*	UG/L
MERCURY	7439-97-6	7	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	7	6	3.4	5.05	6.5	*	UG/L
SELENIUM	7782-49-2	7	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	7	1	NA	NA	3.4	6	UG/L
THALLIUM	7440-28-0	7	1	NA	NA	3.2	*	UG/L
TIN	7440-31-5	7	5	12.6	350.96	1100	*	UG/L
VANADIUM	7440-62-2	7	7	3.9	5.04	6.8	*	UG/L
ZINC	7440-66-6	7	5	7.1	17.54	35.8	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	7	2	2.1	5.2	8.3	.8	PCI/L
ALKALINITY	ALKALINITY	7	7	513	586.57	679	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	7	7	36	46.86	60	5	MG/L
CHLORIDE	12595-89-0	7	7	52	61.49	74.6	.2	MG/L
CONDUCTIVITY	CONDUCT	7	7	3150	3560	4140	6	UMHO
CYANIDE	57-12-5	4	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	7	7	.7	1.53	2.6	.1	MG/L
NITROGEN IN NITRATE	NO3-N	7	3	.5	.63	.7	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	7	6	.37	.69	.88	.1	MG/L
PH MEASUREMENT	PH	7	7	11.9	12	12.1	NA	PH
SULFATE	14808-79-8	7	7	308	408.71	473	.25	MG/L
TOTAL ORGANIC CARBON	TOC	7	7	13	16	20	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	7	7	7.1	71.43	241	5	UG/L

TABLE A-16.3

LABORATORY DATA STATISTICAL REPORT
284-E POWERPLANT WASTEWATER
Sample Location: DRAWLINE SAM TAP, GRND FLOOR 284E PWRHSE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	7	7	17	27.57	42	5	UG/L
ANTIMONY	7440-36-0	7	5	12.9	15.62	17.9	35	UG/L
ARSENIC	7440-38-2	7	4	1.7	19.18	30	*	UG/L
BARIUM	7440-39-3	7	6	1360	2160	3110	1.1	UG/L
BERYLLIUM	7440-41-7	7	6	.2	.37	.4	.3	UG/L
CADMIUM	7440-43-9	7	3	1.1	1.63	2.2	*	UG/L
CHROMIUM	7440-47-3	7	5	1.8	2.94	5.8	*	UG/L
COBALT	7440-48-4	7	5	166	342	601	10	UG/L
COPPER	7440-50-8	7	7	61.2	126.33	231	*	UG/L
LEAD	7439-92-1	7	2	12.5	17.5	22.5	*	UG/L
MERCURY	7439-97-6	7	4	.1	.12	.16	3	UG/L
NICKEL	7440-02-0	7	5	13.6	31.44	47.1	*	UG/L
SELENIUM	7782-49-2	7	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	7	1	NA	NA	3.4	6	UG/L
THALLIUM	7440-28-0	7	2	13.5	29.25	45	*	UG/L
TIN	7440-31-5	7	4	12.6	436.45	1100	*	UG/L
VANADIUM	7440-62-2	7	7	2.2	3.34	5.5	*	UG/L
ZINC	7440-66-6	7	7	87.6	168.23	218	*	UG/L
ALKALINITY	ALKALINITY	7	4	8	20.5	32	.5	MG/L
AMMONIA (AS N)	7664-41-7	7	6	.05	.28	.75	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	7	6	40	252.83	640	5	MG/L
CHLORIDE	12595-89-0	7	7	10200	18842.86	29700	.2	MG/L
CONDUCTIVITY	CONDUCT	7	6	29800	47166.67	56500	6	UMHO
CYANIDE	57-12-5	4	2	10	10	10	10	UG/L
PH MEASUREMENT	PH	7	7	4.8	5.69	7	NA	PH
SULFATE	14808-79-8	7	7	28	38.86	50	.25	MG/L
TOTAL ORGANIC HALIDES	TOX	7	7	139	1950.71	6000	5	UG/L

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TABLE A-16.4

LABORATORY DATA STATISTICAL REPORT
284-E POWERPLANT WASTEWATER
Sample Location: MANHOLE ABOVE DISCHARGE TO 216-B DITCH
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	8	8	8	28.75	57	5	UG/L
DALAPON	75-99-0	8	1	NA	NA	6	6	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	8	3	12	24.67	37	10	UG/L
ANTIMONY	7440-36-0	24	20	12.9	15.21	17.9	35	UG/L
ARSENIC	7440-38-2	24	14	1.5	2.71	9.4	*	UG/L
BARIUM	7440-39-3	24	19	9.6	50.68	158	1.1	UG/L
BERYLLIUM	7440-41-7	24	22	.2	.36	.4	.3	UG/L
CADMIUM	7440-43-9	24	20	1.1	1.24	1.5	*	UG/L
CHROMIUM	7440-47-3	24	22	1.8	3.93	16.4	*	UG/L
COBALT	7440-48-4	24	21	1.5	3.23	20	10	UG/L
COPPER	7440-50-8	24	2	6.4	28.2	50	*	UG/L
LEAD	7439-92-1	24	11	1.5	4.19	9.1	*	UG/L
MERCURY	7439-97-6	24	11	.1	.11	.16	3	UG/L
NICKEL	7440-02-0	24	22	3.4	5.15	6.5	*	UG/L
SELENIUM	7782-49-2	24	8	1.4	2.03	2.3	2	UG/L
SILVER	7440-22-4	24	6	2.6	2.9	3.6	6	UG/L
THALLIUM	7440-28-0	24	8	1.3	2.31	3.8	*	UG/L
TIN	7440-31-5	24	16	5.5	110.31	1000	*	UG/L
VANADIUM	7440-62-2	24	23	2.2	3.79	8.6	*	UG/L
ZINC	7440-66-6	23	17	7.1	17.87	78.3	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	24	4	1.7	3.5	5.2	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	24	6	2	8.22	19	.8	PCI/L
ALKALINITY	ALKALINITY	24	24	48	62.08	82	.5	MG/L
AMMONIA (AS N)	7664-41-7	24	2	.06	175.18	350.3	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	24	6	31	49.5	110	5	MG/L
CHLORIDE	12595-89-0	24	23	1.5	77.22	816	.2	MG/L
CONDUCTIVITY	CONDUCT	24	24	131	382.17	2610	6	UMHO
CYANIDE	57-12-5	4	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	24	20	.01	.12	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	24	7	.2	.21	.3	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	24	3	.12	.34	.7	.1	MG/L
PH MEASUREMENT	PH	24	24	7.5	8.45	9.7	NA	PH
SULFATE	14808-79-8	24	23	10	18.09	32	.25	MG/L
TOTAL ORGANIC CARBON	TOC	24	24	1.1	2.51	7.2	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	8	155	334.88	757	5	UG/L

TABLE A-16.5

LABORATORY DATA STATISTICAL REPORT
284-E POWERPLANT WASTEWATER
Sample Location: MANHOLE DOWNSTREAM 284-E POWERHOUSE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
CHLOROFORM	67-66-3	8	8	7	11.75	16	5	UG/L
ANTIMONY	7440-36-0	8	6	12.9	15.47	17.9	35	UG/L
ARSENIC	7440-38-2	8	4	1.5	1.55	1.7	*	UG/L
BARIUM	7440-39-3	8	7	44.5	130.99	218	1.1	UG/L
BERYLLIUM	7440-41-7	8	7	.2	.37	.4	.3	UG/L
CADMIUM	7440-43-9	8	5	1.1	1.26	1.5	*	UG/L
CHROMIUM	7440-47-3	8	6	1.8	2.67	4.6	*	UG/L
COBALT	7440-48-4	8	6	2.1	14.32	39.6	10	UG/L
COPPER	7440-50-8	8	2	13.9	18.7	23.5	*	UG/L
LEAD	7439-92-1	8	5	2.3	3.82	6.1	*	UG/L
MERCURY	7439-97-6	8	4	.1	.11	.14	3	UG/L
NICKEL	7440-02-0	8	6	3.4	5.07	6.5	*	UG/L
SELENIUM	7782-49-2	8	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	8	1	NA	NA	3.4	6	UG/L
THALLIUM	7440-28-0	8	1	NA	NA	3	*	UG/L
TIN	7440-31-5	8	5	5.5	289.54	800	*	UG/L
VANADIUM	7440-62-2	8	8	2.2	3.7	7.4	*	UG/L
ZINC	7440-66-6	8	5	7.1	17.18	25.1	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	8	2	2	2151	4300	.8	PCI/L
ALKALINITY	ALKALINITY	8	7	48	65	80	.5	MG/L
AMMONIA (AS N)	7664-41-7	8	3	.06	.08	.09	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	8	4	30	44.5	86	5	MG/L
CHLORIDE	12595-89-0	8	8	2.5	281.33	1280	.2	MG/L
CHROMIUM, HEXAVALENT	18540-29-9	3	1	NA	NA	10	10	UG/L
CONDUCTIVITY	CONDUCT	8	8	152	1051.38	3920	6	UMHO
CYANIDE	57-12-5	4	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	8	6	.1	.13	.2	.1	MG/L
NITROGEN IN NITRATE	NO3-N	8	3	.2	.2	.2	.2	MG/L
PH MEASUREMENT	PH	8	8	7.5	8.74	10	NA	PH
SULFATE	14808-79-8	8	8	16	24.38	39	.25	MG/L
TOTAL ORGANIC CARBON	TOC	8	8	1.2	1.8	2.7	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	8	8	64.9	292.48	1290	5	UG/L

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TABLE A-16.6

LABORATORY DATA STATISTICAL REPORT
284-E POWERPLANT WASTEWATER
Sample Location: OUTSIDE 283-E WATER TRMT PLANT (MANHOLE)
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	7	1	NA	NA	12	10	UG/L
CHLOROFORM	67-66-3	7	7	20	43	59	5	UG/L
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	7	1	NA	NA	24	10	UG/L
ANTIMONY	7440-36-0	7	5	12.9	15.62	17.9	35	UG/L
ARSENIC	7440-38-2	7	2	2.2	7.15	12.1	*	UG/L
BARIUM	7440-39-3	7	6	11.3	29.3	41.5	1.1	UG/L
BERYLLIUM	7440-41-7	7	6	.2	.37	.4	.3	UG/L
CADMIUM	7440-43-9	7	5	1.1	1.26	1.5	*	UG/L
CHROMIUM	7440-47-3	7	6	2.5	7.55	18.9	*	UG/L
COBALT	7440-48-4	7	6	1.5	2.07	2.6	10	UG/L
COPPER	7440-50-8	7	2	5.4	19.05	32.7	*	UG/L
LEAD	7439-92-1	7	2	3.5	4.25	5	*	UG/L
MERCURY	7439-97-6	7	4	.1	.12	.18	3	UG/L
NICKEL	7440-02-0	7	6	3.4	5.57	6.8	*	UG/L
SELENIUM	7782-49-2	7	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	7	1	NA	NA	3.4	6	UG/L
THALLIUM	7440-28-0	7	2	.9	1.85	2.8	*	UG/L
TIN	7440-31-5	7	4	12.6	335.55	700	*	UG/L
VANADIUM	7440-62-2	7	7	2.2	5.07	11	*	UG/L
ZINC	7440-66-6	7	4	7.1	22.45	59.5	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	7	4	3.8	5.4	8.1	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	7	3	2.9	3.23	3.9	.8	PCI/L
ALKALINITY	ALKALINITY	7	7	49	58.86	66	.5	MG/L
AMMONIA (AS N)	7664-41-7	7	1	NA	NA	.05	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	7	2	30	31	32	5	MG/L
CHLORIDE	12595-89-0	7	7	2.6	3.56	4.7	.2	MG/L
CONDUCTIVITY	CONDUCT	7	7	136	146.57	162	6	UMHO
CYANIDE	57-12-5	4	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	7	6	.1	.1	.1	.1	MG/L
NITROGEN IN NITRATE	NO3-N	7	2	.2	.2	.2	.2	MG/L
PH MEASUREMENT	PH	7	7	7.3	7.56	7.7	NA	PH
SULFATE	14808-79-8	7	7	16	18.43	21	.25	MG/L
SULFIDE	SULFIDE	7	1	NA	NA	1	.1	MG/L
TOTAL ORGANIC CARBON	TOC	7	7	2.1	4.71	14	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	7	7	282	511.86	1170	5	UG/L

TABLE A-16.7

LABORATORY DATA STATISTICAL REPORT
284-E POWERPLANT WASTEWATER
Sample Location: SAM TAP, MUD DRUM BLOWDOWN BEHIND 284-E
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BENZOIC ACID	65-85-0	7	6	90	246.67	550	50	UG/L
ANTIMONY	7440-36-0	7	3	12.9	15.17	17.9	35	UG/L
ARSENIC	7440-38-2	7	2	1.9	2.5	3.1	*	UG/L
BARIUM	7440-39-3	7	4	1.2	2.15	3.1	1.1	UG/L
BERYLLIUM	7440-41-7	7	6	.2	.37	.4	.3	UG/L
CADMIUM	7440-43-9	7	5	1.1	1.36	2	*	UG/L
CHROMIUM	7440-47-3	7	6	1.8	2.25	2.5	*	UG/L
COBALT	7440-48-4	7	5	2.1	3.8	7.3	10	UG/L
COPPER	7440-50-8	7	7	13.3	69.36	169	*	UG/L
LEAD	7439-92-1	7	3	6.5	11.37	18.6	*	UG/L
MERCURY	7439-97-6	7	5	.1	.12	.2	3	UG/L
NICKEL	7440-02-0	7	6	3.4	5.75	7.9	*	UG/L
SELENIUM	7782-49-2	7	2	1.8	2.05	2.3	2	UG/L
SILVER	7440-22-4	7	1	NA	NA	3.4	6	UG/L
THALLIUM	7440-28-0	7	1	NA	NA	3.1	*	UG/L
TIN	7440-31-5	7	5	12.6	350.96	1100	*	UG/L
VANADIUM	7440-62-2	7	7	3.3	4.97	7.6	*	UG/L
ZINC	7440-66-6	7	6	7.1	37.07	64.1	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	7	1	NA	NA	2.5	.8	PCI/L
ALKALINITY	ALKALINITY	7	7	238	517.43	758	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	7	5	36	51	64	5	MG/L
CHLORIDE	12595-89-0	7	7	25.6	54.01	77.2	.2	MG/L
CONDUCTIVITY	CONDUCT	7	7	1410	3134.29	4390	6	UMHO
CYANIDE	57-12-5	4	2	10	10	10	10	UG/L
FLUORIDE	7782-41-4	7	7	.4	1.59	2.7	.1	MG/L
NITROGEN IN NITRATE	NO3-N	7	5	.4	.6	.8	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	7	6	.17	.57	.89	.1	MG/L
PH MEASUREMENT	PH	7	6	11.6	11.92	12.1	NA	PH
SULFATE	14808-79-8	7	7	155	352.43	470	.25	MG/L
TOTAL ORGANIC CARBON	TOC	7	7	7.2	15	22	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	7	6	12	45.12	145	5	UG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
282-E RESERVOIR	28	259
DRAWLINE SAM TAP 2ND FLOOR 284E PWRHSE	31	259
DRAWLINE SAM TAP, GRND FLOOR 284E PWRHSE	27	259
MANHOLE ABOVE DISCHARGE TO 216-B DITCH	35	259
MANHOLE DOWNSTREAM 284-E POWERHOUSE	32	259
OUTSIDE 283-E WATER TRMT PLANT (MANHOLE)	35	259
SAM TAP, MUD DRUM BLOWDOWN BEHIND 284-E	31	259

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

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TABLE A-17.1

LABORATORY DATA STATISTICAL REPORT
400 AREA SECONDARY COOLING WATER
Sample Location: DISCH PT FFTF COOLING TOWER OVERFLOW
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
MONOCROTOPHOS	6923-22-4	2	1	NA	NA	3.3	.96	UG/L
ALUMINUM	7429-90-5	3	3	49	58.27	64	*	UG/L
ANTIMONY	7440-36-0	4	4	17.9	38.38	60	35	UG/L
ARSENIC	7440-38-2	4	2	2.3	3.4	4.5	*	UG/L
BARIUM	7440-39-3	4	4	22.2	29.43	34.8	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.68	1	.3	UG/L
CADMIUM	7440-43-9	4	4	1.4	3.48	7	*	UG/L
CALCIUM	7440-70-2	3	3	34900	47300	57100	91.8	UG/L
CHROMIUM	7440-47-3	4	4	1.8	5.28	9	*	UG/L
COBALT	7440-48-4	4	4	1.5	5.35	9	10	UG/L
COPPER	7440-50-8	4	4	10.5	15.25	19.7	*	UG/L
IRON	7439-89-6	3	3	15.5	70.83	111	*	UG/L
LEAD	7439-92-1	4	2	3.1	5.55	8	*	UG/L
MAGNESIUM	7439-95-4	3	3	10500	14400	16900	*	UG/L
MANGANESE	7439-96-5	3	2	14.8	16.95	19.1	*	UG/L
MERCURY	7439-97-6	4	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	11.73	20	*	UG/L
POTASSIUM	7440-09-7	3	3	9180	12826.67	16200	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	3	3.3	4.57	7	6	UG/L
SODIUM	7440-23-5	3	3	40100	49033.33	62700	*	UG/L
THALLIUM	7440-28-0	2	1	NA	NA	2.2	*	UG/L
TIN	7440-31-5	1	1	NA	NA	6.7	*	UG/L
VANADIUM	7440-62-2	4	4	2.3	5.3	8	*	UG/L
ZINC	7440-66-6	4	4	38.3	75.53	110	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	4	6.25	9.11	12.3	.8	PCI/L
TOTAL URANIUM	7440-61-1	4	3	.047	.14	.231	.02	UG/L
TRITIUM	10028-17-8	4	4	5400	6562.5	8200	135	PCI/L
ALKALINITY	ALKALINITY	4	4	150	209.25	276	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	3	5.7	9.03	15.4	5	MG/L
CHLORIDE	12595-89-0	4	4	11.7	16.45	21.2	.2	MG/L
COLIFORM TOTAL AND FECAL	COLIFORM	4	1	NA	NA	2.2	1	TCOL
CONDUCTIVITY	CONDUCT	4	4	400	526.75	653	6	UMHO
CYANIDE	57-12-5	4	3	10	13.33	20	10	UG/L
FLUORIDE	7782-41-4	4	3	.4	.51	.6	.1	MG/L
NITROGEN IN NITRATE	NO3-N	1	1	NA	NA	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	2	.34	9.87	19.4	.1	MG/L
PH MEASUREMENT	PH	4	4	7.9	8.6	9	NA	PH
PHOSPHATE	14265-4442	4	3	.4	.51	.74	.25	MG/L
PHOSPHORUS, ALL FORMS	7723-14-0	4	4	.32	.74	1	.05	MG/L
SULFATE	14808-79-8	4	4	40.3	51.85	67	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	297	343	383	5	MG/L
TOTAL INORGANIC CARBON	TIC	2	1	NA	NA	3.7	1.2	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1.2	2.25	3.7	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	4	88.9	158.48	234	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	2	5	10	15	5	MG/L

TABLE A-17.2

LABORATORY DATA STATISTICAL REPORT
400 AREA SECONDARY COOLING WATER
Sample Location: DISCH PT, FFTF COOLING TOWER BLOWDWN LNE
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	4	1	NA	NA	12	10	UG/L
MONOCROTOPHOS	6923-22-4	2	1	NA	NA	3.2	.96	UG/L
ALUMINUM	7429-90-5	3	3	49	60.37	67.6	*	UG/L
ANTIMONY	7440-36-0	4	4	17.9	38.38	60	35	UG/L
ARSENIC	7440-38-2	4	3	3.5	4.97	6.4	*	UG/L
BARIUM	7440-39-3	4	4	34.7	46.53	56.5	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.68	1	.3	UG/L
CADMIUM	7440-43-9	4	4	1.4	3.48	7	*	UG/L
CALCIUM	7440-70-2	3	3	65400	80633.33	91200	91.8	UG/L
CHROMIUM	7440-47-3	4	4	1.8	5.28	9	*	UG/L
COBALT	7440-48-4	4	4	1.7	5.4	9	10	UG/L
COPPER	7440-50-8	4	4	10	13.15	18.8	*	UG/L
IRON	7439-89-6	3	3	24.9	83.87	174	*	UG/L
LEAD	7439-92-1	4	2	2.8	3.2	3.6	*	UG/L
MAGNESIUM	7439-95-4	3	3	19400	24633.33	27300	*	UG/L
MANGANESE	7439-96-5	3	2	13.1	23.95	34.8	*	UG/L
MERCURY	7439-97-6	4	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	11.73	20	*	UG/L
POTASSIUM	7440-09-7	3	3	18400	23033.33	26000	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	3	3.3	4.57	7	6	UG/L
SODIUM	7440-23-5	3	3	67700	91566.67	106000	*	UG/L
THALLIUM	7440-28-0	2	1	NA	NA	2.2	*	UG/L
TIN	7440-31-5	1	1	NA	NA	6.7	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	6.48	14.5	*	UG/L
ZINC	7440-66-6	4	4	29.1	70.13	147	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	4	1	NA	NA	1.82	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	3	14	14.87	16	.8	PCI/L
TOTAL URANIUM	7440-61-1	4	2	.02	.12	.229	.02	UG/L
TRITIUM	10028-17-8	4	4	4580	5840	7780	135	PCI/L
ALKALINITY	ALKALINITY	4	3	270	333.67	384	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	3	6	18.9	35.3	5	MG/L
CHLORIDE	12595-89-0	4	4	.82	23.96	37.2	.2	MG/L
CONDUCTIVITY	CONDUCT	4	4	491	756.25	895	6	UMHO
CYANIDE	57-12-5	4	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	3	.7	.79	.9	.1	MG/L
NITROGEN IN NITRATE	NO3-N	1	1	NA	NA	.3	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	3	.25	.32	.4	.1	MG/L
PH MEASUREMENT	PH	4	4	8.7	8.78	8.9	NA	PH
PHOSPHATE	14265-4442	4	2	.31	.36	.4	.25	MG/L
PHOSPHORUS, ALL FORMS	7723-14-0	4	4	.87	.97	1.1	.05	MG/L
SULFATE	14808-79-8	4	4	47.9	84.73	115	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	370	583.67	792	5	MG/L
TOTAL INORGANIC CARBON	TIC	2	2	2.3	36.45	70.6	1.2	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	2.3	2.9	3.5	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	4	138	287.75	423	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	2	6	12.5	19	5	MG/L

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TABLE A-17.3

LABORATORY DATA STATISTICAL REPORT
400 AREA SECONDARY COOLING WATER
Sample Location: DISCH PT, FMEF LIQ RET WASTE SYS (LRW'S)
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
MONOCROTOPHOS	6923-22-4	2	1	NA	NA	3.2	.96	UG/L
ALUMINUM	7429-90-5	3	3	191	327.67	465	*	UG/L
ANTIMONY	7440-36-0	4	4	17.9	38.38	60	35	UG/L
ARSENIC	7440-38-2	4	3	2	2.77	3.5	*	UG/L
BARIUM	7440-39-3	4	4	48.7	69.33	94.5	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.68	1	.3	UG/L
CADMIUM	7440-43-9	4	4	1.4	3.85	7	*	UG/L
CALCIUM	7440-70-2	3	3	30100	36900	43000	91.8	UG/L
CHROMIUM	7440-47-3	4	4	3.4	6.15	9	*	UG/L
COBALT	7440-48-4	4	4	2.7	5.65	9	10	UG/L
COPPER	7440-50-8	4	4	9.8	31.3	62.3	*	UG/L
IRON	7439-89-6	3	3	178	288	410	*	UG/L
LEAD	7439-92-1	4	2	13.2	13.6	14	*	UG/L
MAGNESIUM	7439-95-4	3	3	7160	9586.67	11200	*	UG/L
MANGANESE	7439-96-5	3	2	10.3	20.85	31.4	*	UG/L
MERCURY	7439-97-6	4	4	.16	.45	.69	3	UG/L
NICKEL	7440-02-0	4	4	5.8	15	20	*	UG/L
POTASSIUM	7440-09-7	3	3	8870	11823.33	15300	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	3	3.3	4.57	7	6	UG/L
SODIUM	7440-23-5	3	3	33400	37833.33	41200	*	UG/L
THALLIUM	7440-28-0	2	1	NA	NA	2.2	*	UG/L
TIN	7440-31-5	1	1	NA	NA	6.7	*	UG/L
VANADIUM	7440-62-2	4	4	7.8	11.88	16.7	*	UG/L
ZINC	7440-66-6	4	4	538	807.25	1480	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	3	4.95	7.23	8.8	.8	PCI/L
TOTAL URANIUM	7440-61-1	4	3	.192	.35	.496	.02	UG/L
TRITIUM	10028-17-8	4	4	4500	5635	6300	135	PCI/L
ALKALINITY	ALKALINITY	4	4	135	154.5	169	.5	MG/L
AMMONIA (AS N)	7664-41-7	4	1	NA	NA	.3	.05	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	4	5.7	32.43	67	5	MG/L
CHLORIDE	12595-89-0	4	4	13.3	15.5	17.2	.2	MG/L
COLIFORM TOTAL AND FECAL	COLIFORM	4	2	2	5	8	1	TCOL
CONDUCTIVITY	CONDUCT	3	3	328	427	492	6	UMHO
CYANIDE	57-12-5	4	3	10	17.97	33.9	10	UG/L
FLUORIDE	7782-41-4	4	2	.5	.5	.5	.1	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	4	.96	1.82	2.97	.1	MG/L
OIL & GREASE	OIL&GREASE	4	1	NA	NA	5.3	5	MG/L
PH MEASUREMENT	PH	4	4	7.5	8.13	8.5	NA	PH
PHOSPHATE	14265-4442	4	3	.6	1.07	1.6	.25	MG/L
PHOSPHORUS, ALL FORMS	7723-14-0	4	4	.48	.79	1.1	.05	MG/L
SULFATE	14808-79-8	4	4	28.5	40.98	50	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	238	292.75	340	5	MG/L
TOTAL INORGANIC CARBON	TIC	2	2	2.6	15.65	28.7	1.2	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	2.6	5.6	12	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	4	19.6	61.55	151	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	4	7	18.75	31	5	MG/L

TABLE A-17.4

LABORATORY DATA STATISTICAL REPORT
400 AREA SECONDARY COOLING WATER
Sample Location: END OF PIPE DISCH TO PERCOLATION PONDS
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALUMINUM	7429-90-5	3	3	25.5	46.17	64	*	UG/L
ANTIMONY	7440-36-0	4	4	17.9	38.38	60	35	UG/L
ARSENIC	7440-38-2	4	3	3.5	3.73	4.1	*	UG/L
BARIUM	7440-39-3	4	4	32.6	36.78	39.3	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.68	1	.3	UG/L
CADMIUM	7440-43-9	4	4	1.4	3.48	7	*	UG/L
CALCIUM	7440-70-2	3	3	56500	61933.33	66000	91.8	UG/L
CHROMIUM	7440-47-3	4	4	1.8	5.28	9	*	UG/L
COBALT	7440-48-4	4	4	1.5	5.35	9	10	UG/L
COPPER	7440-50-8	4	4	7	9.23	12.6	*	UG/L
IRON	7439-89-6	3	3	18.5	39.57	50.4	*	UG/L
LEAD	7439-92-1	4	2	3.7	3.8	3.9	*	UG/L
MAGNESIUM	7439-95-4	3	3	16700	18466.67	19900	*	UG/L
MANGANESE	7439-96-5	3	2	14.1	20.95	27.8	*	UG/L
MERCURY	7439-97-6	4	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	11.73	20	*	UG/L
POTASSIUM	7440-09-7	3	3	15400	16933.33	18800	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	3	3.3	4.57	7	6	UG/L
SODIUM	7440-23-5	3	3	59200	68466.67	73500	*	UG/L
THALLIUM	7440-28-0	2	1	NA	NA	2.2	*	UG/L
TIN	7440-31-5	1	1	NA	NA	6.7	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	5.95	12.4	*	UG/L
ZINC	7440-66-6	4	4	26.3	55.68	104	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	3	9.6	11.67	13.1	.8	PCI/L
TOTAL URANIUM	7440-61-1	4	2	.113	.16	.207	.02	UG/L
TRITIUM	10028-17-8	4	4	5000	6035	7940	135	PCI/L
ALKALINITY	ALKALINITY	4	4	240	281	313	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	2	8	10.3	12.6	5	MG/L
CHLORIDE	12595-89-0	4	4	22.1	24.63	26.7	.2	MG/L
COLIFORM TOTAL AND FECAL	COLIFORM	4	3	4	544.67	1600	1	TCOL
CONDUCTIVITY	CONDUCT	4	4	546	642.25	716	6	UMHO
CYANIDE	57-12-5	4	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	4	.51	.63	.7	.1	MG/L
NITROGEN IN NITRATE	NO3-N	1	1	NA	NA	.2	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	2	.2	.36	.52	.1	MG/L
OIL & GREASE	OIL&GREASE	4	1	NA	NA	5.4	5	MG/L
PH MEASUREMENT	PH	4	4	8.8	8.85	8.9	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	4	.42	.81	1.05	.05	MG/L
SULFATE	14808-79-8	4	4	67.4	73.63	81	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	456	509	560	5	MG/L
TOTAL INORGANIC CARBON	TIC	2	2	47.9	51.65	55.4	1.2	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1.6	2.7	3.9	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	4	118	150.75	192	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	2	5	8.5	12	5	MG/L

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TABLE A-17.5

LABORATORY DATA STATISTICAL REPORT
400 AREA SECONDARY COOLING WATER
Sample Location: RAW WATER - SAMPLER DISCRETION
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALUMINUM	7429-90-5	1	1	NA	NA	64	*	UG/L
ANTIMONY	7440-36-0	1	1	NA	NA	57	35	UG/L
BARIUM	7440-39-3	1	1	NA	NA	28.6	1.1	UG/L
BERYLLIUM	7440-41-7	1	1	NA	NA	1	.3	UG/L
CADMIUM	7440-43-9	1	1	NA	NA	4	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	41700	91.8	UG/L
CHROMIUM	7440-47-3	1	1	NA	NA	7	*	UG/L
COBALT	7440-48-4	1	1	NA	NA	8	10	UG/L
COPPER	7440-50-8	1	1	NA	NA	9	*	UG/L
IRON	7439-89-6	1	1	NA	NA	28.7	*	UG/L
LEAD	7439-92-1	1	1	NA	NA	6	*	UG/L
MAGNESIUM	7439-95-4	1	1	NA	NA	12200	*	UG/L
MANGANESE	7439-96-5	1	1	NA	NA	6.6	*	UG/L
MERCURY	7439-97-6	1	1	NA	NA	.1	3	UG/L
NICKEL	7440-02-0	1	1	NA	NA	19	*	UG/L
POTASSIUM	7440-09-7	1	1	NA	NA	10400	*	UG/L
SILVER	7440-22-4	1	1	NA	NA	7	6	UG/L
SODIUM	7440-23-5	1	1	NA	NA	41900	*	UG/L
VANADIUM	7440-62-2	1	1	NA	NA	7	*	UG/L
ZINC	7440-66-6	1	1	NA	NA	64	*	UG/L
GROSS ALPHA ANALYSIS AT <60 PCI/L	GROSS ALPH	1	1	NA	NA	1.82	.2	PCI/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	1	1	NA	NA	13	.8	PCI/L
TOTAL URANIUM	7440-61-1	1	1	NA	NA	.221	.02	UG/L
TRITIUM	10028-17-8	1	1	NA	NA	7670	135	PCI/L
ALKALINITY	ALKALINITY	1	1	NA	NA	170	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	1	1	NA	NA	5.7	5	MG/L
CHLORIDE	12595-89-0	1	1	NA	NA	15.5	.2	MG/L
COLIFORM TOTAL AND FECAL	COLIFORM	1	1	NA	NA	22	1	TCOL
CONDUCTIVITY	CONDUCT	1	1	NA	NA	483	6	UMHO
CYANIDE	57-12-5	1	1	NA	NA	10	10	UG/L
FLUORIDE	7782-41-4	1	1	NA	NA	.5	.1	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	1	1	NA	NA	.23	.1	MG/L
PH MEASUREMENT	PH	1	1	NA	NA	8.7	NA	PH
PHOSPHATE	14265-4442	1	1	NA	NA	.3	.25	MG/L
PHOSPHORUS, ALL FORMS	7723-14-0	1	1	NA	NA	.89	.05	MG/L
SULFATE	14808-79-8	1	1	NA	NA	47.6	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	1	1	NA	NA	333	5	MG/L
TOTAL INORGANIC CARBON	TIC	1	1	NA	NA	1.8	1.2	MG/L
TOTAL ORGANIC CARBON	TOC	1	1	NA	NA	1.8	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	1	1	NA	NA	142	5	UG/L

TABLE A-17.6

LABORATORY DATA STATISTICAL REPORT
400 AREA SECONDARY COOLING WATER
Sample Location: SANITARY WATER (SINK IN RM 611/BLDG 483)
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ALUMINUM	7429-90-5	3	3	22.8	45.27	64	*	UG/L
ANTIMONY	7440-36-0	4	4	17.9	38.38	60	35	UG/L
ARSENIC	7440-38-2	4	2	2	2.05	2.1	*	UG/L
BARIUM	7440-39-3	4	4	16.4	18.68	20.5	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.3	.68	1	.3	UG/L
CADMIUM	7440-43-9	4	4	1.4	3.48	7	*	UG/L
CALCIUM	7440-70-2	3	3	31000	31600	32200	91.8	UG/L
CHROMIUM	7440-47-3	4	4	1.8	5.28	9	*	UG/L
COBALT	7440-48-4	4	4	1.5	5.35	9	10	UG/L
COPPER	7440-50-8	4	4	2.8	6.3	9	*	UG/L
IRON	7439-89-6	3	3	15	45.63	88.4	*	UG/L
LEAD	7439-92-1	4	2	2.5	2.55	2.6	*	UG/L
MAGNESIUM	7439-95-4	3	3	8910	9106.67	9310	*	UG/L
MANGANESE	7439-96-5	3	2	2	5.35	8.7	*	UG/L
MERCURY	7439-97-6	4	4	.1	.1	.1	3	UG/L
NICKEL	7440-02-0	4	4	3.7	11.73	20	*	UG/L
POTASSIUM	7440-09-7	3	3	6840	6960	7040	*	UG/L
SELENIUM	7782-49-2	4	1	NA	NA	2.3	2	UG/L
SILVER	7440-22-4	4	2	3.3	3.35	3.4	6	UG/L
SODIUM	7440-23-5	3	3	32700	33733.33	35300	*	UG/L
THALLIUM	7440-28-0	2	1	NA	NA	2.2	*	UG/L
TIN	7440-31-5	1	1	NA	NA	6.7	*	UG/L
VANADIUM	7440-62-2	4	4	2.1	4.85	8	*	UG/L
ZINC	7440-66-6	4	4	4.8	18.73	31	*	UG/L
GROSS BETA ANALYSIS AT <60 PCI/L	GROSS BETA	4	4	5.6	5.83	6.14	.8	PCI/L
TOTAL URANIUM	7440-61-1	4	2	.021	.06	.091	.02	UG/L
TRITIUM	10028-17-8	4	4	5700	6727.5	8030	135	PCI/L
ALKALINITY	ALKALINITY	4	4	130	137.75	141	.5	MG/L
CHEMICAL OXYGEN DEMAND	COD	4	1	NA	NA	8.2	5	MG/L
CHLORIDE	12595-89-0	4	4	10.7	11.45	12.6	.2	MG/L
CONDUCTIVITY	CONDUCT	4	3	316	341	358	6	UMHO
CYANIDE	57-12-5	4	3	10	10	10	10	UG/L
FLUORIDE	7782-41-4	4	2	.3	.35	.4	.1	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	4	1	NA	NA	.37	.1	MG/L
OIL & GREASE	OIL&GREASE	4	1	NA	NA	5.5	5	MG/L
PH MEASUREMENT	PH	4	4	7.9	8.05	8.1	NA	PH
PHOSPHORUS, ALL FORMS	7723-14-0	4	2	.049	.11	.17	.05	MG/L
SULFATE	14808-79-8	4	4	34	35.78	37.2	.25	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	227	244.75	262	5	MG/L
TOTAL INORGANIC CARBON	TIC	2	2	29.4	30.1	30.8	1.2	MG/L
TOTAL ORGANIC CARBON	TOC	4	1	NA	NA	.55	.5	MG/L
TOTAL ORGANIC HALIDES	TOX	4	4	33.3	61.53	81.2	5	UG/L
TOTAL SUSPENDED SOLIDS	TSS	4	2	8	12	16	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
DISCH PT FFTF COOLING TOWER OVERFLOW	47	321
DISCH PT, FFTF COOLING TOWER BLOWDWN LNE	48	321
DISCH PT, FMEF LIQ RET WASTE SYS (LRW'S)	47	320
END OF PIPE DISCH TO PERCOLATION PONDS	45	320
RAW WATER - SAMPLER DISCRETION	40	215
SANITARY WATER (SINK IN RM 611/BLDG 483)	43	320

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.
n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.

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DL - Minimum value reported with a U qualifier for entire database.
* - DL not specified
CASN - Chemical Abstract Service Number

TABLE A-18.1

LABORATORY DATA STATISTICAL REPORT
300 AREA WASTEWATER
Sample Location: THIRD MANHOLE FROM OUTFALL
Date from 01/01/92 to 04/18/95

Constituent Name	CASN	N	n	Minimum	Average	Maximum	DL	Units
ACETONE	67-64-1	5	3	42	49.33	60	10	UG/L
ACETONITRILE	75-05-8	4	1	NA	NA	280	20	UG/L
BROMODICHLOROMETHANE	75-27-4	6	1	6	6	6	5	UG/L
CHLOROFORM	67-66-3	6	6	1.8	14.0	59.3	5	UG/L
2,4-D	94-75-7	3	1	NA	NA	2	1	UG/L
DALAPON	75-99-0	3	1	NA	NA	6	6	UG/L
2,4-DB	94-82-6	3	1	NA	NA	2	2	UG/L
DICAMBA	1918-00-9	3	1	NA	NA	.2	.2	UG/L
DICHLOROPROP	120-36-5	3	1	NA	NA	2	2	UG/L
DINOSEB	88-85-7	3	1	NA	NA	1.2	1	UG/L
MCPA	94-74-6	3	1	NA	NA	200	20	UG/L
MCPP	93-65-2	3	1	NA	NA	200	20	UG/L
4-METHYL-2-PENTANONE	108-10-1	5	1	NA	NA	12	10	UG/L
2,4,5-T	93-76-5	3	1	NA	NA	.2	.2	UG/L
2,4,5-TP (SILVEX)	93-72-1	3	1	NA	NA	.2	.2	UG/L
ALUMINUM	7429-90-5	6	6	109	562.2	2640	*	UG/L
ANTIMONY	7440-36-0	4	4	10.8	13.45	17.9	35	UG/L
ARSENIC	7440-38-2	4	4	1.5	1.98	2.2	*	UG/L
BARIUM	7440-39-3	6	6	26	31.45	40	1.1	UG/L
BERYLLIUM	7440-41-7	4	4	.2	.4	.8	.3	UG/L
BORON	7440-42-8	4	4	22.5	27.9	32.7	115	UG/L
CADMIUM	7440-43-9	6	6	1	2.25	4	*	UG/L
CALCIUM	7440-70-2	1	1	NA	NA	20400	91.8	UG/L
CHROMIUM	7440-47-3	6	6	1.8	14	59.3	*	UG/L
COBALT	7440-48-4	4	4	1.5	2.5	3	10	UG/L
COPPER	7440-50-8	6	6	10.1	27.3	40	*	UG/L
IRON	7439-89-6	6	5	89.7	170.74	231	*	UG/L
LEAD	7439-92-1	6	2	2.5	3.9	5.3	*	UG/L
MAGNESIUM	7439-95-4	5	3	4610	4816.67	5010	*	UG/L
MANGANESE	7439-96-5	6	6	4.2	21.07	81.3	*	UG/L
MERCURY	7439-97-6	6	6	.1	.12	.16	3	UG/L
MOLYBDENUM	7439-98-7	3	2	2.7	15.95	29.2	8	UG/L
NICKEL	7440-02-0	4	4	3.4	23.3	81.7	*	UG/L
POTASSIUM	7440-09-7	6	6	969	1251.5	2120	*	UG/L
SELENIUM	7782-49-2	6	2	2	2.2	2.4	2	UG/L
SILICON	7440-21-3	4	2	2380	2690	3000	*	UG/L
SILVER	7440-22-4	6	4	2.6	3.0	3.4	6	UG/L
SODIUM	7440-23-5	6	6	3800	8640	15600	*	UG/L
TIN	7440-31-5	4	4	5.5	9.85	13	*	UG/L
VANADIUM	7440-62-2	4	4	2.3	3.2	5.5	*	UG/L
ZINC	7440-66-6	6	6	37.8	181.65	851	*	UG/L
TRITIUM	10028-17-8	2	2	344	591.5	839	135	PCI/L
ALKALINITY	ALKALINITY	5	5	51	57	60	.5	MG/L
COLIFORM TOTAL AND FECAL	COLIFORM	1	1	NA	NA	1	1	TCOL
CHLORIDE	12595-89-0	2	2	4.4	4.5	4.6	.2	MG/L
CYANIDE	57-12-5	6	3	5	11.67	20	10	UG/L
NITROGEN IN NITRATE	NO3-N	5	2	.2	.25	.3	.2	MG/L
NITROGEN IN NITRATE AND NITRITE	NO2+NO3-N	7	4	.32	265.78	739	.1	MG/L
TOTAL DISSOLVED SOLIDS	TDS	4	4	89	98.5	111	5	MG/L
TOTAL ORGANIC CARBON	TOC	4	4	1.3	1.95	2.8	.5	MG/L
TOTAL SUSPENDED SOLIDS	TSS	4	3	5	6.67	8	5	MG/L

Sample Location	Constituents Detected	Constituents Below Detection Limit
THIRD MANHOLE FROM OUTFALL	50	281

N - Total number of sampling events where constituent was analyzed and reported and the sample identified as primary.

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n - Number of analytical results above detection level (data with no laboratory qualifiers or flagged with C, D, S, or X in addition to having a validation qualifier of J or none).
These data are used for statistical summary.
NA - Not applicable.
Minimum, Average, Maximum - Statistics on data results meeting "n" criteria. If n = 1 data result placed in maximum column.
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CASN - Chemical Abstract Service Number

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